
Mdt che cambia gli zeri in uni

```
q={{A,"0",A,"1",D},
   {A,"1",A,"1",D},
   {A," ",G," ",S}};
Elaborazione[q,"110101010"];
```

1	1	0	1	0	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	0	1	0	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	0	1	0	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	0	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	0	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	1	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	1	1	0	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	1	1	1	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	1	1	1	1	0	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	1	1	1	1	1	
---	---	---	---	---	---	---	---	---	--

A

1	1	1	1	1	1	1	1	1	
---	---	---	---	---	---	---	---	---	--

G

Mdt che cambia gli zeri in uni, gli uni in zeri e torna a posto

```

q={
  {A,"0",A,"1",D},
  {A,"1",A,"0",D},
  {A," ",B," ",S},
  {B," ",G," ",D},
  {B,"0",B,"0",S},
  {B,"1",B,"1",S}};

```

```
Elaborazione[q,"110101010"];
```

	1	1	0	1	0	1	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	1	0	1	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	0	1	0	1	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	1	0	1	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	0	1	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	1	1	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	1	0	0	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	1	0	1	1	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	1	0	1	0	0	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--

A

	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



	0	0	1	0	1	0	1	0	1	
--	---	---	---	---	---	---	---	---	---	--



Mdt che cambia 00 in 11

```

q={{A,"0",B,"0",D},
  {A,"1",A,"1",D},
  {B,"0",C,"1",S},
  {B,"1",A,"1",D},
  {C,"0",A,"1",D},
  {A," ",G," ",S},
  {B," ",G," ",S}};

```

Elaborazione[q,"0100101001"];

0	1	0	0	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

A

0	1	0	0	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

B

0	1	0	0	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

A

0	1	0	0	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

B

0	1	0	1	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

C

0	1	1	1	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

A

0	1	1	1	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

A

0	1	1	1	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

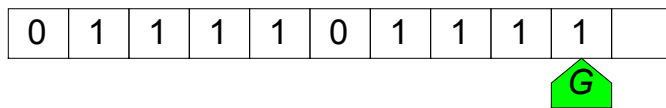
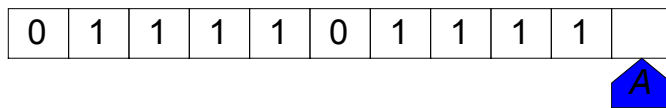
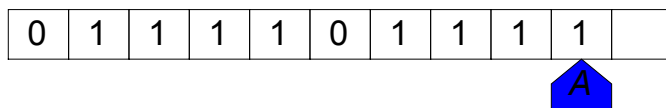
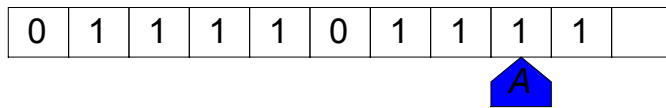
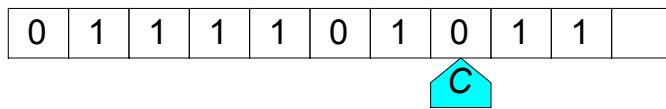
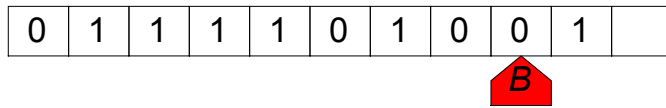
A

0	1	1	1	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

B

0	1	1	1	1	0	1	0	0	1	
---	---	---	---	---	---	---	---	---	---	--

A



Mdt che aggiunge 1 ad un numero binario

```

q={ (* si va in fondo *)
  {A,"0",A,"0",D},
  {A,"1",A,"1",D},
  {A," ",B," ",S},
  (* si torna senza riporto *)
  {B,"0",C,"1",S},
  {C,"0",C,"0",S},
  {C,"1",C,"1",S},
  (* si torna con riporto *)
  {B,"1",B,"0",S},
  {B," ",C,"1",S},
  (* si torna con riporto *)
  {C," ",G," ",D}};

```

```
Elaborazione[q,"010011111"];

```

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

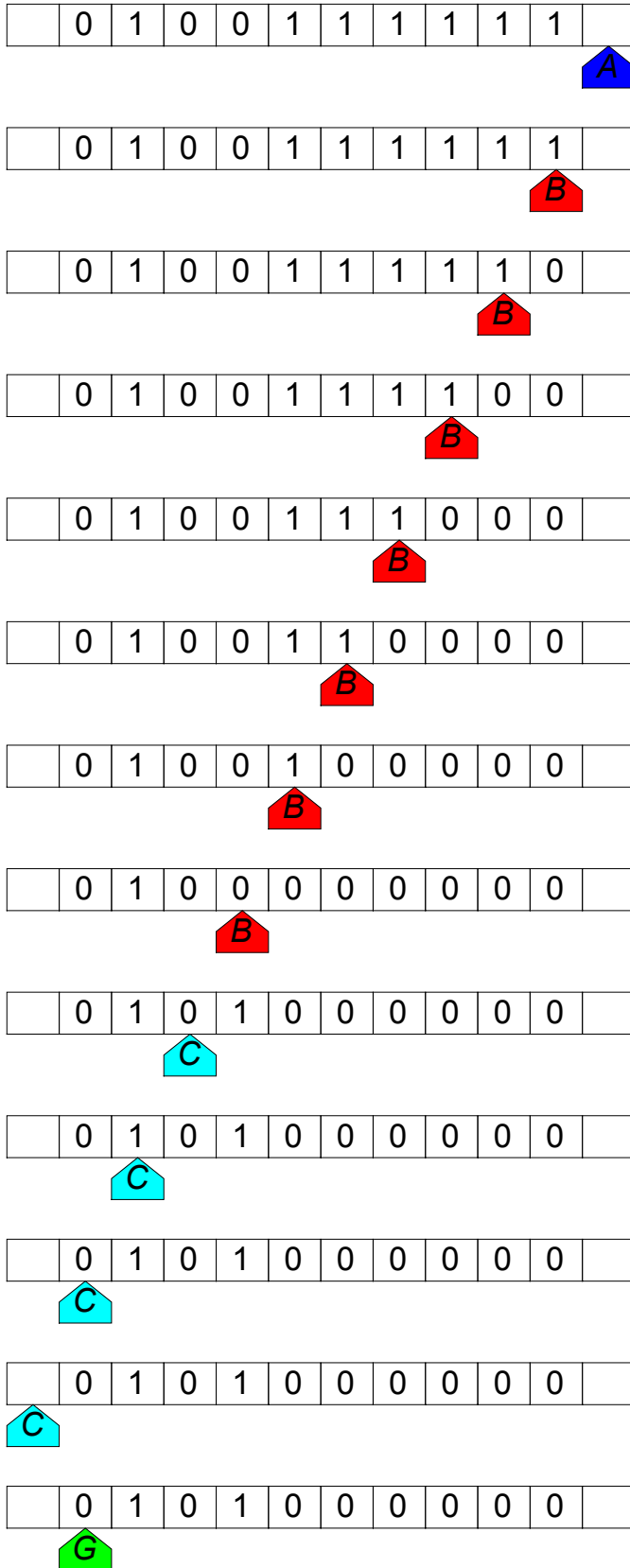
A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A

	0	1	0	0	1	1	1	1	1	1	
--	---	---	---	---	---	---	---	---	---	---	--

A



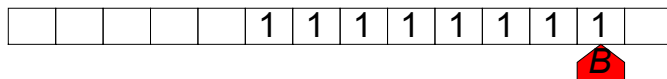
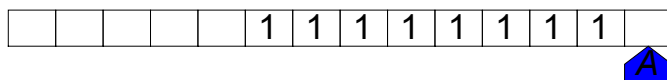
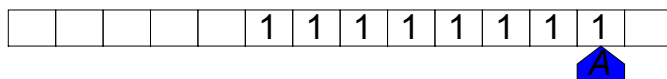
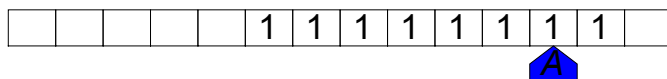
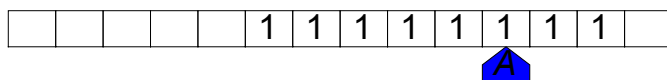
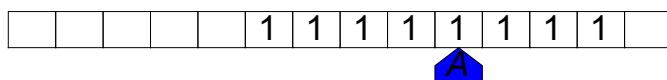
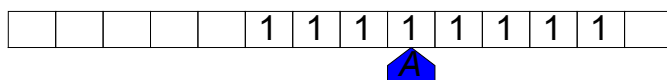
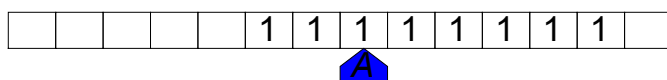
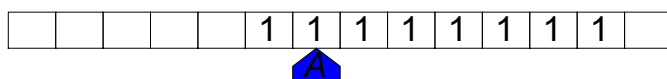
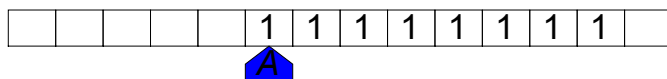
Contatore binario

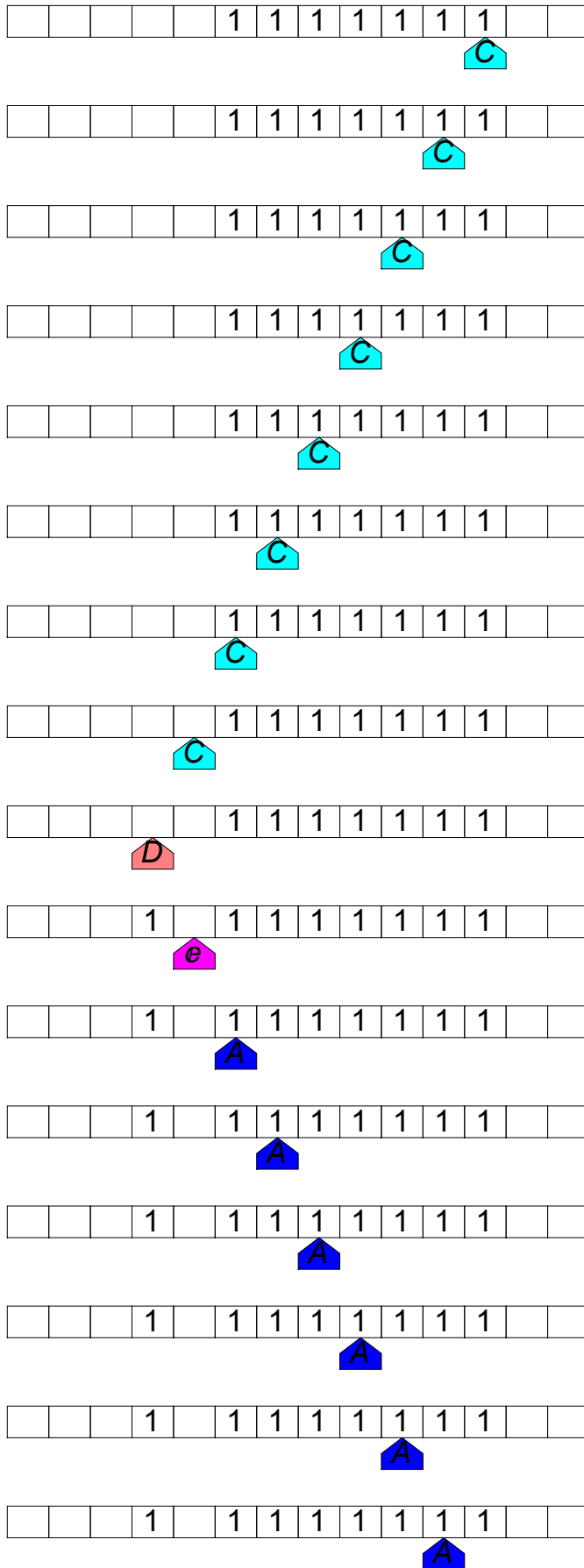
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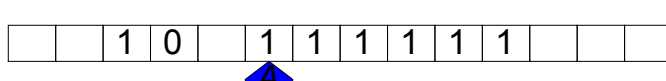
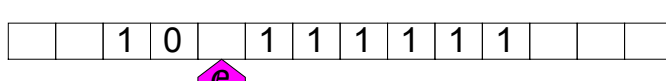
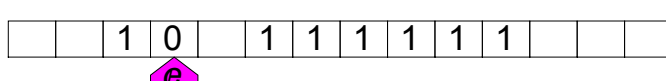
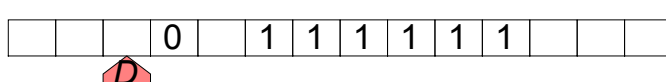
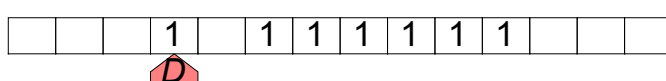
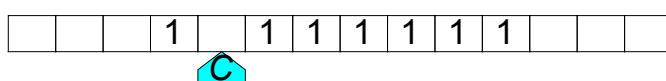
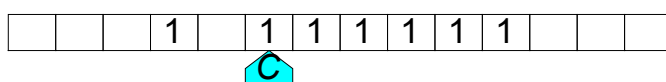
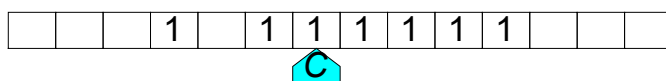
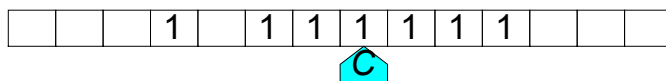
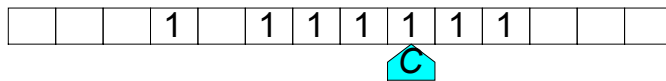
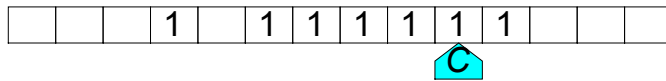
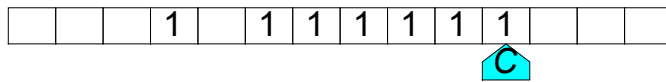
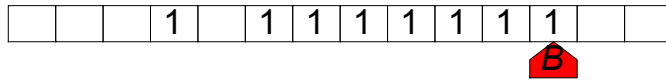
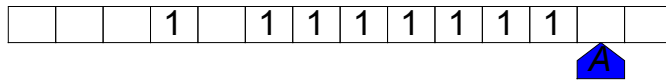
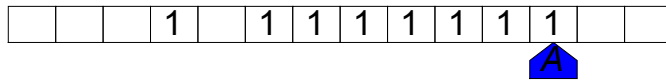
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(* si va in fondo *)
{A,"1",A,"1",D},
{A," ",B," ",S},
(* si toglie un uno e si ritorna *)
{B,"1",C," ",S},
(* e si ritorna *)
{C,"1",C,"1",S},
{C," ",D," ",S},
(* si aggiunge uno *)
{D,"0",E,"1",D},
{D,"1",D,"0",S},
{D," ",E,"1",D},
(* si ricerca la stringa *)
{E,"1",E,"1",D},
{E,"0",E,"0",D},
(* e si ricomincia *)
{E," ",A," ",D}};

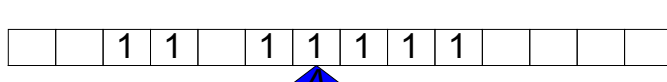
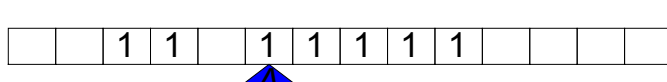
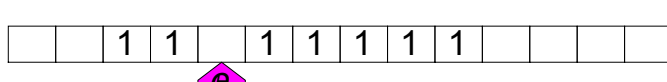
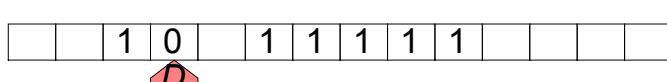
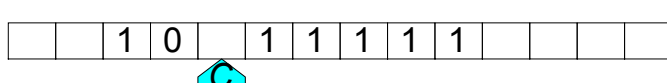
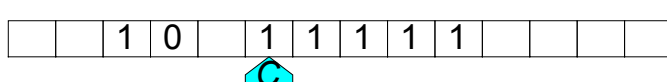
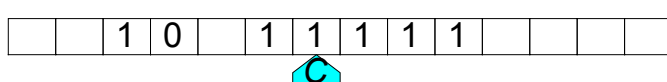
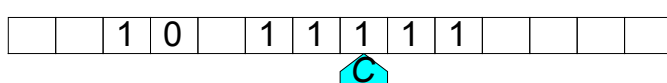
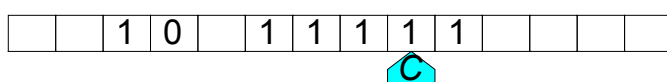
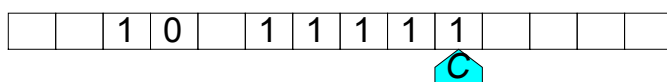
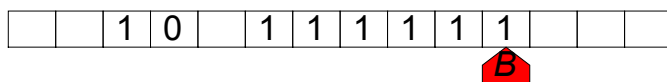
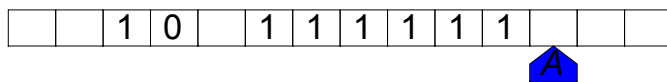
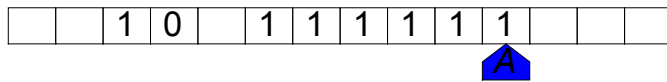
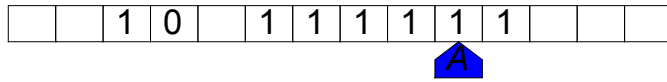
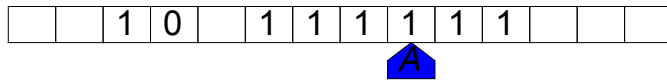
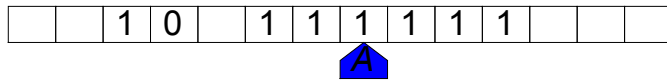
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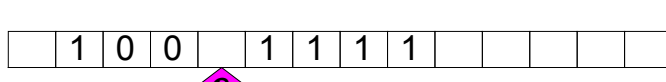
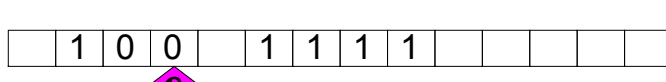
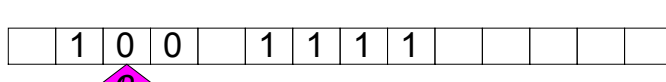
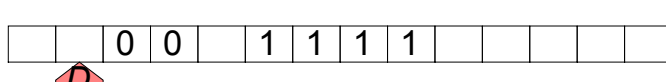
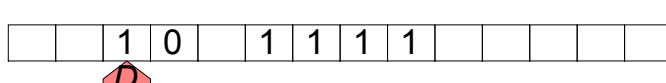
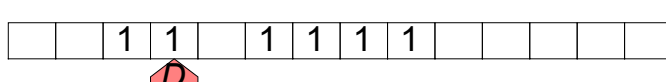
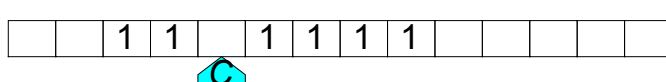
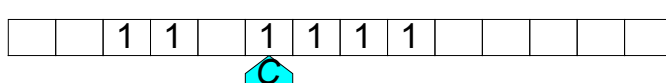
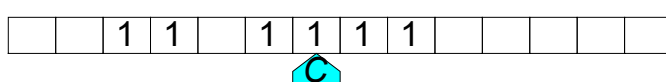
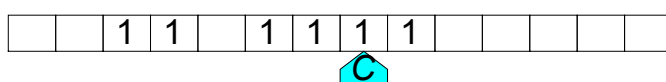
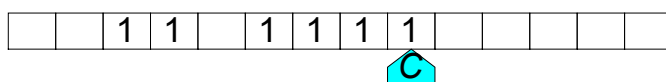
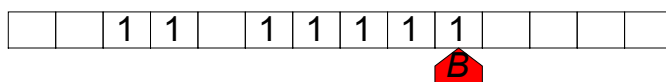
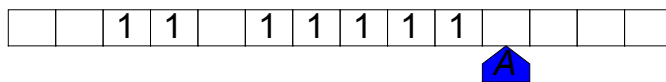
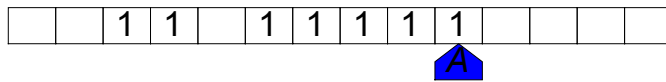
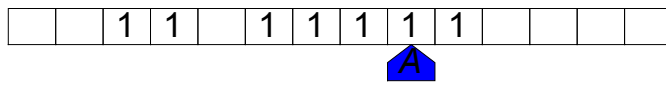
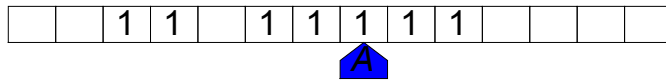
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Elaborazione[q,"11111111"];
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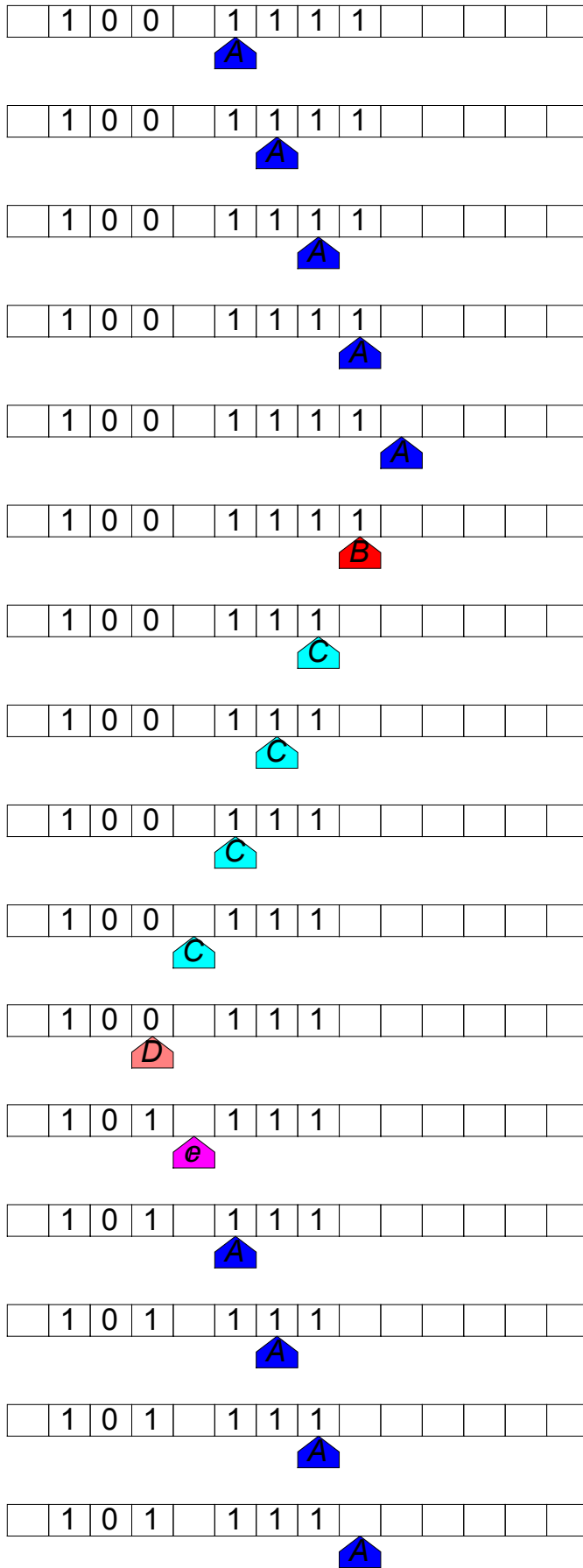












1	0	1		1	1	1								
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B

1	0	1		1	1									
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C

1	0	1		1	1									
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C

1	0	1		1	1									
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C

1	0	1		1	1									
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D

1	0	0		1	1									
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D

1	1	0		1	1									
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e

1	1	0		1	1									
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e

1	1	0		1	1									
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A

1	1	0		1	1									
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A

1	1	0		1	1									
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A

1	1	0		1	1									
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B

1	1	0		1										
---	---	---	--	---	--	--	--	--	--	--	--	--	--	--

C

1	1	0		1										
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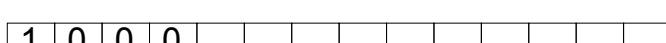
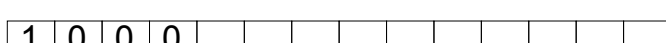
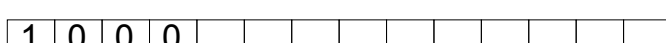
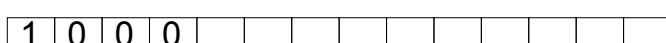
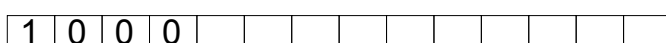
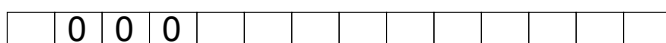
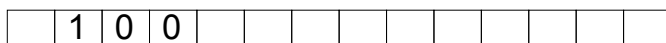
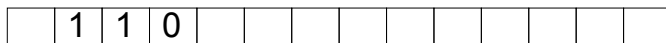
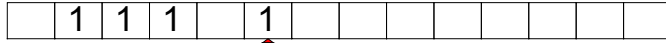
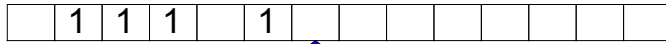
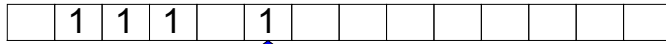
C

1	1	0		1										
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D

1	1	1		1										
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e



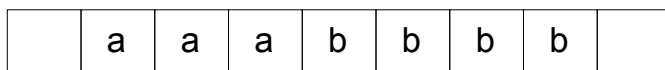
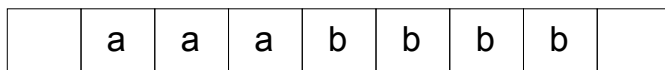
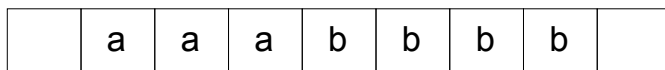
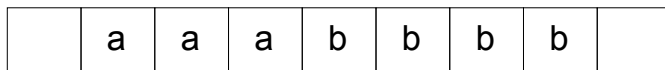
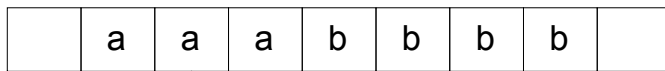
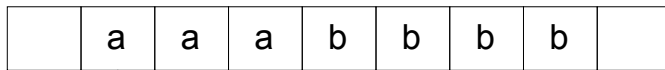
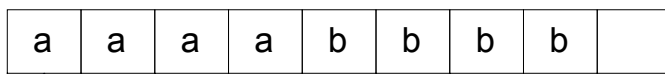
Riconoscimento $a^n b^n$

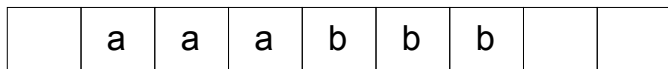
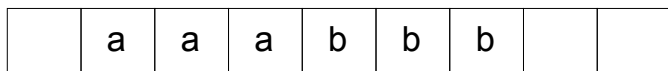
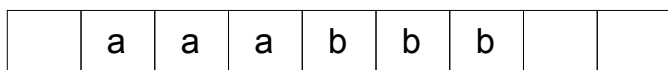
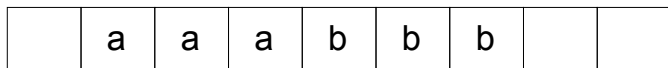
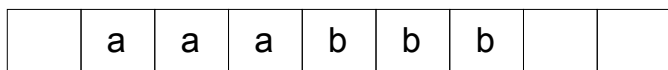
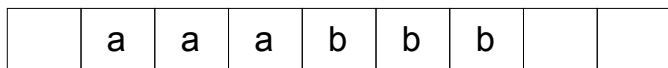
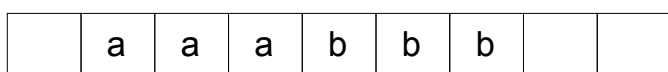
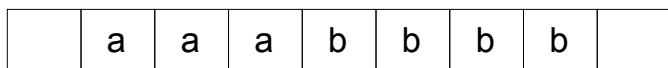
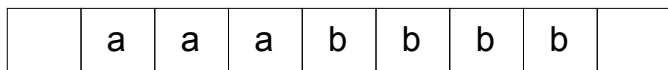
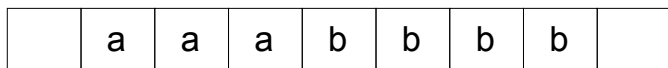
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q={{A,"a",B," ",D},
(* si va in fondo *)
{B,"a",B,"a",D},
{B,"b",B,"b",D},
{B," ",C," ",S},
(* si torna indietro *)
{C,"b",E," ",S},
{E,"a",E,"a",S},
{E,"b",E,"b",S},
(* si ricomincia *)
{E," ",A," ",D}
(* se il nastro è vuoto OK*)
{A," ",G," ",D}};

```

```
Elaborazione[q,"aaaabbbb"];
```





Elaborazione[q, "aaaabbbb"];

a	a	a	a	b	b	b	b	b	
---	---	---	---	---	---	---	---	---	--

A

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

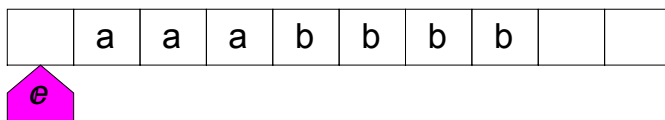
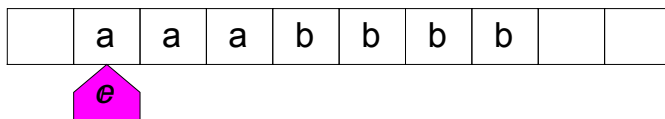
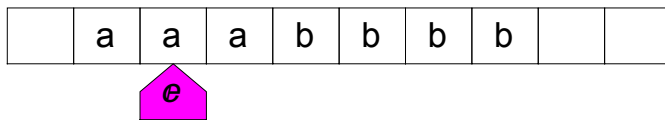
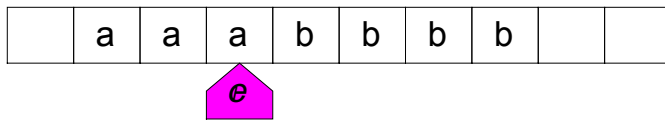
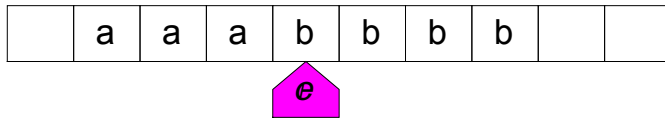
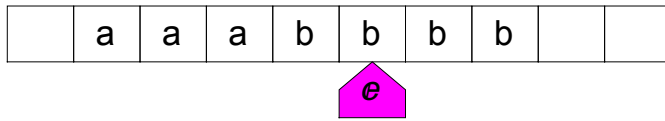
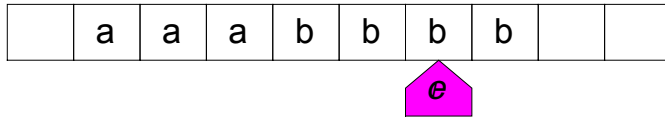
B

	a	a	a	b	b	b	b	b	
--	---	---	---	---	---	---	---	---	--

C

	a	a	a	b	b	b	b		
--	---	---	---	---	---	---	---	--	--

e



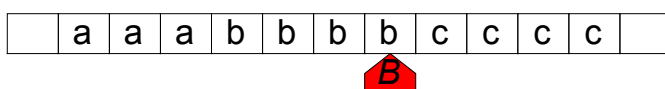
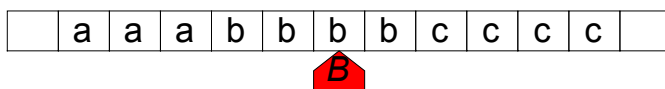
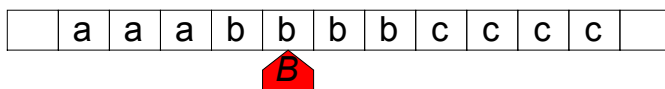
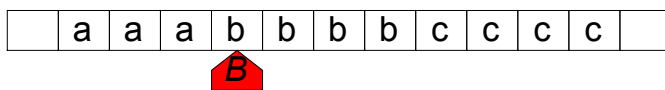
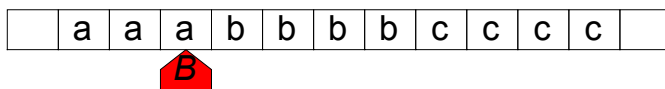
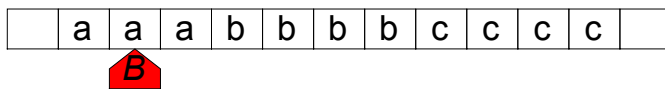
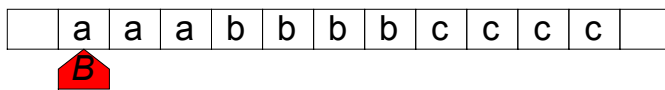
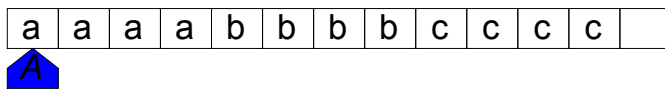
Riconoscimento $a^n b^n c^n$

```


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{B,"a",B,"a",D},
{B,"b",B,"b",D},
{B,"c",C,"c",S},
{B,"d",C,"d",S},
{C,"b",D,"d",S},
{D,"a",D,"a",S},
{D,"b",D,"b",S},
{D,"",A,"",D},
(* trattamento di d e c *)
{A,"d",E,"",D},
{E,"d",E,"d",D},
{E,"c",E,"c",D},
{E,"",F,"",S},
{F,"c",H,"",S},
{H,"d",H,"d",S},
{H,"c",H,"c",S},
{H,"",A,"",D},
(* se il nastro è vuoto OK*)
{A,"",G,"",D}};

```


Elaborazione[q,"aaaabbbbcccc"];




	a	a	a	b	b	b	b	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	b	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




	a	a	a	b	b	b	d	c	c	c	c	
--	---	---	---	---	---	---	---	---	---	---	---	--




		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--




		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--




		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--




		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--




		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--




		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **B**


		a	a	b	b	b	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **C**


		a	a	b	b	d	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **D**


		a	a	b	b	d	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **D**


		a	a	b	b	d	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **D**


		a	a	b	b	d	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **D**


		a	a	b	b	d	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **D**


		a	a	b	b	d	d	c	c	c	c	
--	--	---	---	---	---	---	---	---	---	---	---	--

 **A**


			a	b	b	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **B**


			a	b	b	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **B**


			a	b	b	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **B**


			a	b	b	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **B**


			a	b	b	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **C**

			a	b	d	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **D**

			a	b	d	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

 **D**

			a	b	d	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

D

			a	b	d	d	d	c	c	c	c	
--	--	--	---	---	---	---	---	---	---	---	---	--

A

				b	d	d	d	c	c	c	c	
--	--	--	--	---	---	---	---	---	---	---	---	--

B

				b	d	d	d	c	c	c	c	
--	--	--	--	---	---	---	---	---	---	---	---	--

B

				b	d	d	d	c	c	c	c	
--	--	--	--	---	---	---	---	---	---	---	---	--

C

				d	d	d	d	c	c	c	c	
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D

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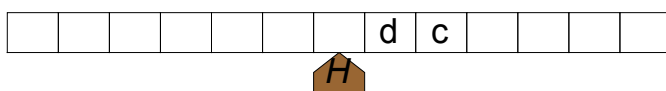
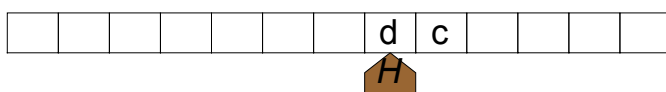
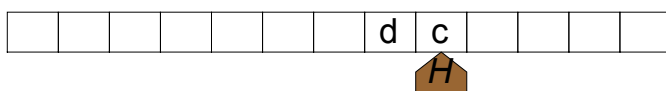
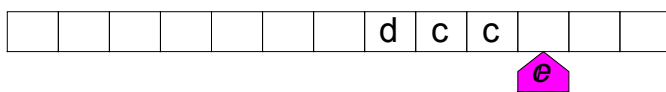
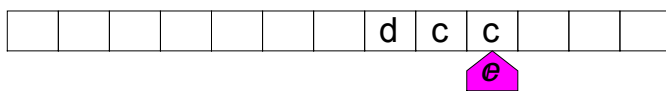
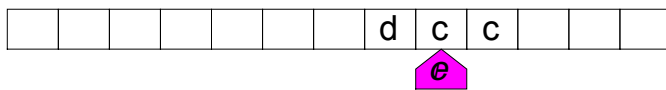
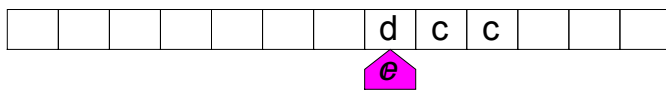
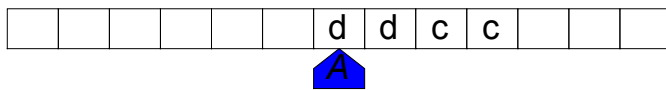
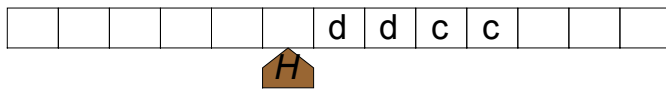
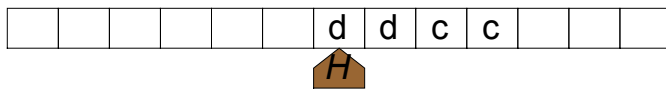
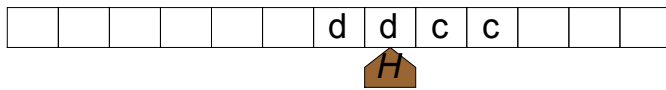
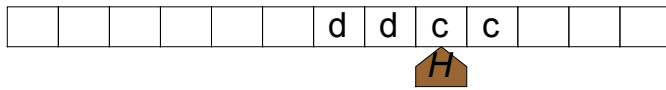
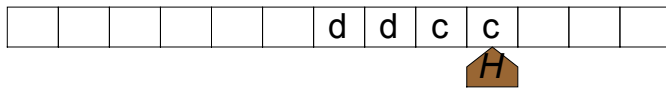
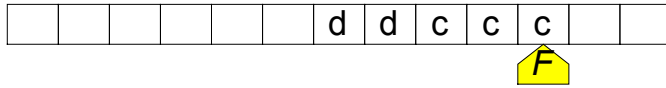
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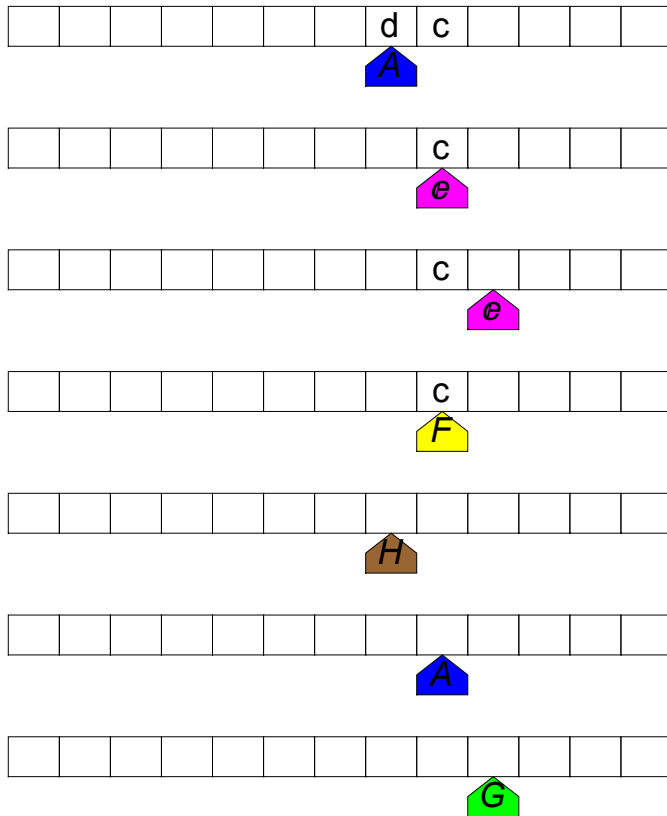
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Elaborazione[q, "aaabbbcccc"];

