

**Ejercicio 1:  $a b^* a b^*$**

Diagrama de estados:

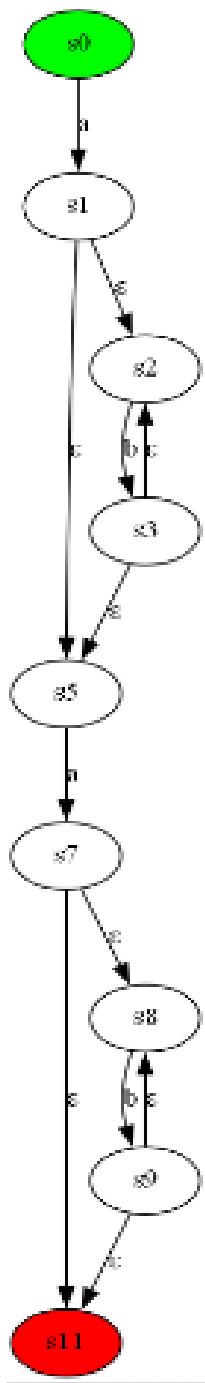


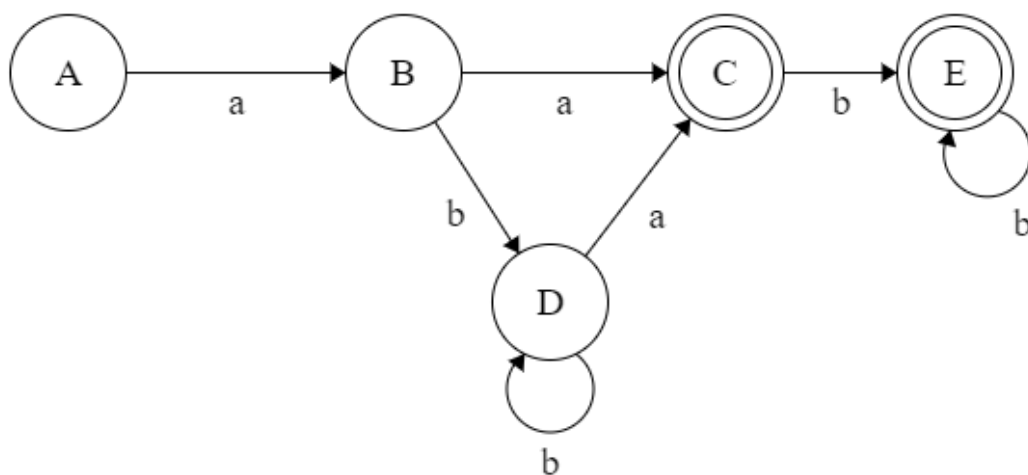
Tabla de transiciones:

| Estados | a  | b  | $\epsilon$ |
|---------|----|----|------------|
| S0      | S1 | -  | -          |
| S1      | -  | -  | {S4, S2}   |
| S2      | -  | S3 | -          |
| S3      | -  | -  | {S4, S2}   |
| S4      | S5 | -  | -          |
| S5      | -  | -  | {S8, S6}   |
| S6      | -  | S7 | -          |
| S7      | -  | -  | {S8, S6}   |
| S8      | -  | -  | -          |

Tabla de transiciones (Subconjuntos):

| Estados      | Nombre Estados | a      | b      |
|--------------|----------------|--------|--------|
| S0           | A              | B {S1} | -      |
| {S1,S2,S4}   | B              | C {S5} | D {S3} |
| {S5, S6,S8}  | C              | -      | E {S7} |
| {S3, S2, S4} | D              | C      | D      |
| {S7, S6, S8} | E              | -      | E      |

Diagrama de estados (subconjuntos)



## Ejercicio 2: $0?(1?)?0^*$

Diagrama de estados:

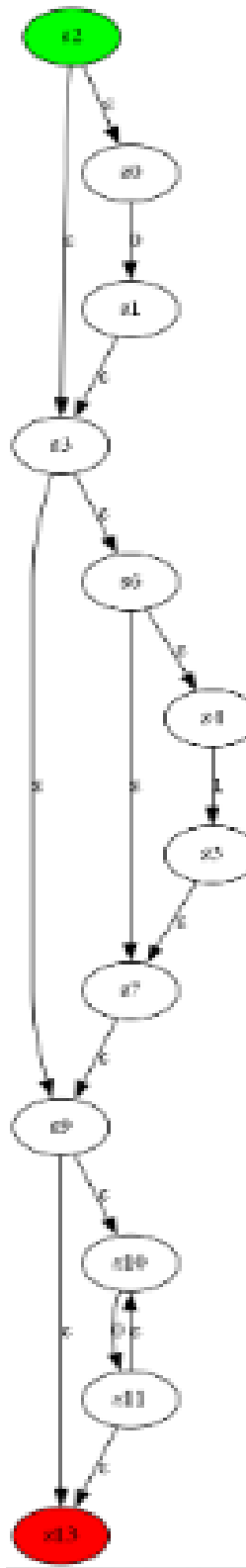


Tabla de transiciones:

| Estados | 0     | 1    | $\epsilon$ |
|---------|-------|------|------------|
| S0      | -     | -    | {S1,S3}    |
| S1      | S2    | -    | {S3}       |
| S2      | -     | -    | {S3}       |
| S3      | -     | -    | {S4, S8}   |
| S4      | -     | -    | {S5,S7}    |
| S5      | -     | {S6} | -          |
| S6      | -     | -    | {S7}       |
| S7      | -     | -    | {S8}       |
| S8      | -     | -    | {S9, S11}  |
| S9      | {S10} | -    | -          |
| S10     | -     | -    | {S9, S11}  |
| S11     | -     | -    | -          |

Tabla de transiciones (subconjuntos)

| Estados                         | Nombre Estados | 0           | 1     |
|---------------------------------|----------------|-------------|-------|
| {S0,S1,S3,S4,S8,S5,S7,S9,S11}   | A              | B {S2, S10} | C{S6} |
| {S2,S3,S4,S8,S5,S7,S9,S10, S11} | B              | D {S10}     | C{S6} |
| {S6, S7,S8,S9,S11}              | C              | D {S10}     | -     |
| {S9, S10, S11}                  | D              | D {S10}     | -     |

Diagrama de estados:

