

# Actividad 1.6 Implementación de la técnica de programación "backtracking" y "ramificación y poda"

**Curso:** TC2038

**Grupo:** 601

**Integrantes:**

Daniel Emilio Fuentes Portaluppi - A01708302  
Daniel Sebastián Cajas Morales - A01708637  
Diego Ernesto Sandoval Vargas - A01709113

**Profesor:** Ramona Fuentes Valdéz

Septiembre 10, 2023

## Casos de Prueba

### *Caso 1*

- Entrada:

**M:4 N:5**

1 0 1 1 1

1 1 1 0 1

1 0 1 1 1

1 1 1 0 1

- Salida:

```
Maze 1:

Expected Matrix:
Row 1: 1 0 0 0 0
Row 2: 1 1 1 0 0
Row 3: 0 0 1 1 1
Row 4: 0 0 0 0 1

Solution:
Row 1: 1 0 0 0 0
Row 2: 1 1 1 0 0
Row 3: 0 0 1 1 1
Row 4: 0 0 0 0 1
```

### *Caso 2*

- Entrada:

**M:6 N:6**

1 1 1 1 0 1

1 1 0 1 1 1

1 0 0 1 0 1

1 1 0 1 0 1

0 1 0 1 1 1

1 1 1 1 0 1

- Salida:

```
Maze 2:

Expected Matrix:
Row 1: 1 1 1 1 0 0
Row 2: 0 0 0 1 0 0
Row 3: 0 0 0 1 0 0
Row 4: 0 0 0 1 0 0
Row 5: 0 0 0 1 1 1
Row 6: 0 0 0 0 0 1

Solution:
Row 1: 1 1 1 1 0 0
Row 2: 0 0 0 1 0 0
Row 3: 0 0 0 1 0 0
Row 4: 0 0 0 1 0 0
Row 5: 0 0 0 1 1 1
Row 6: 0 0 0 0 0 1
```

### *Caso 3*

- Entrada:

**M:4 N:4**

1 0 0 1

1 1 1 0

0 1 1 1

1 0 0 1

- Salida:

```
Maze 3:

Expected Matrix:
Row 1: 1 0 0 0
Row 2: 1 1 0 0
Row 3: 0 1 1 1
Row 4: 0 0 0 1

Solution:
Row 1: 1 0 0 0
Row 2: 1 1 0 0
Row 3: 0 1 1 1
Row 4: 0 0 0 1
```

#### *Caso 4*

- Entrada:

M:7 N:9

1 1 0 1 1 1 1 1 0

0 1 1 1 0 0 0 1 1

1 1 0 1 1 1 1 1 0

1 0 0 0 1 1 0 1 1

1 1 0 1 1 0 0 0 1

0 1 0 1 0 1 0 0 1

1 1 1 1 0 1 1 0 1

- Salida:

```
Maze 4:

Expected Matrix:
Row 1: 1 1 0 0 0 0 0 0 0
Row 2: 0 1 1 1 0 0 0 0 0
Row 3: 0 0 0 1 1 1 1 1 0
Row 4: 0 0 0 0 0 0 0 1 1
Row 5: 0 0 0 0 0 0 0 0 1
Row 6: 0 0 0 0 0 0 0 0 1
Row 7: 0 0 0 0 0 0 0 0 1

Solution:
Row 1: 1 1 0 0 0 0 0 0 0
Row 2: 0 1 1 1 0 0 0 0 0
Row 3: 0 0 0 1 1 1 1 1 0
Row 4: 0 0 0 0 0 0 0 1 1
Row 5: 0 0 0 0 0 0 0 0 1
Row 6: 0 0 0 0 0 0 0 0 1
Row 7: 0 0 0 0 0 0 0 0 1
```