

**MSc. Computer Science**  
**Sem – III**  
**AOS**

**Assignment 3**

**GROUP C:**

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## Link to the executable code

[https://github.com/snigdhadip99/Msc\\_3rd-Sem\\_AOS/blob/main/Raymonds-Algorithm.py](https://github.com/snigdhadip99/Msc_3rd-Sem_AOS/blob/main/Raymonds-Algorithm.py)

## Data Sets

- The program takes the number of nodes as input at run time

Enter number of nodes: 3

## Screenshots

```
"c:/Users/KANKANA GHOSH/AppData/Local/Programs/Python/Python38/AOS prac/Raymonds-Algorithm.py"
Enter number of nodes: 4
|- 0 ( free , queue: [] )
  |- 1 ( free , queue: [] )
    |- 2 ( free , queue: [] )
      |- 3 ( free , queue: [] )

|- 0 ( free , queue: [] )
  |- 1 ( free , queue: [] )
    |- 2 ( free , queue: [] )
      |- 3 ( free , queue: [] )

|- 0 ( free , queue: [] )
  |- 1 ( free , queue: [] )
    |- 2 ( free , queue: [] )
      |- 3 ( free , queue: [] )

|- 0 ( free , queue: [] )
  |- 1 ( free , queue: [] )
    |- 2 ( free , queue: [] )
      |- 3 ( free , queue: [] )

|- 0 ( free , queue: [] )
  |- 1 ( free , queue: [] )
    |- 2 ( free , queue: [] )
      |- 3 ( free , queue: [] )

|- 3 ( crit , queue: [] )
  |- 2 ( free , queue: [] )
    |- 1 ( free , queue: [] )
      |- 0 ( free , queue: [] )

|- 3 ( crit , queue: [] )
  |- 2 ( free , queue: [] )
    |- 1 ( free , queue: [] )
      |- 0 ( free , queue: [] )

|- 3 ( free , queue: [] )
  |- 2 ( free , queue: [] )
    |- 1 ( free , queue: [] )
      |- 0 ( free , queue: [] )
```

```
| - 1 ( crit , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( crit , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( crit , queue: [] )
  | - 0 ( free , queue: [] )
  | - 2 ( free , queue: [] )
    | - 3 ( free , queue: [] )

| - 3 ( crit , queue: [] )
  | - 2 ( free , queue: [] )
    | - 1 ( free , queue: [] )
      | - 0 ( free , queue: [] )

| - 3 ( crit , queue: [] )
  | - 2 ( free , queue: [] )
    | - 1 ( free , queue: [] )
      | - 0 ( free , queue: [] )

| - 2 ( crit , queue: [] )
  | - 1 ( free , queue: [] )
    | - 0 ( free , queue: [] )
  | - 3 ( free , queue: [] )
```

```
| - 2 ( crit , queue: [] )
  | - 1 ( free , queue: [] )
    | - 0 ( free , queue: [] )
  | - 3 ( free , queue: [] )

| - 2 ( free , queue: [] )
  | - 1 ( free , queue: [] )
    | - 0 ( free , queue: [] )
  | - 3 ( free , queue: [] )

| - 2 ( free , queue: [] )
  | - 1 ( free , queue: [] )
    | - 0 ( free , queue: [] )
  | - 3 ( free , queue: [] )

| - 3 ( crit , queue: [2] )
  | - 2 ( free , queue: [] )
    | - 1 ( free , queue: [] )
      | - 0 ( wait , queue: [] )

| - 3 ( free , queue: [2] )
  | - 2 ( free , queue: [] )
    | - 1 ( free , queue: [] )
      | - 0 ( wait , queue: [] )

| - 0 ( crit , queue: [] )
  | - 1 ( free , queue: [] )
    | - 2 ( free , queue: [] )
      | - 3 ( free , queue: [] )

| - 3 ( crit , queue: [] )
  | - 2 ( free , queue: [] )
    | - 1 ( free , queue: [] )
      | - 0 ( free , queue: [] )

| - 3 ( crit , queue: [2] )
  | - 2 ( wait , queue: [2] )
    | - 1 ( wait , queue: [] )
      | - 0 ( free , queue: [] )

| - 1 ( crit , queue: [2] )
  | - 0 ( free , queue: [] )
  | - 2 ( wait , queue: [] )
    | - 3 ( free , queue: [] )

| - 1 ( free , queue: [2] )
  | - 0 ( free , queue: [] )
  | - 2 ( wait , queue: [] )
    | - 3 ( free , queue: [] )

| - 2 ( crit , queue: [] )
  | - 1 ( free , queue: [] )
    | - 0 ( free , queue: [] )
  | - 3 ( free , queue: [] )

| - 2 ( free , queue: [] )
  | - 1 ( free , queue: [] )
    | - 0 ( free , queue: [] )
  | - 3 ( free , queue: [] )
```

```
| - 0 ( crit , queue: [1] )
|   | - 1 ( free , queue: [] )
|     | - 2 ( wait , queue: [] )
|       | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
```

```
| - 2 ( crit , queue: [1] )
|   | - 1 ( wait , queue: [] )
|     | - 0 ( free , queue: [] )
|   | - 3 ( free , queue: [] )
```

```
| - 1 ( crit , queue: [] )
| - 0 ( free , queue: [] )
| - 2 ( free , queue: [] )
| - 3 ( free , queue: [] )
```

```
| - 1 ( crit , queue: [0] )
| - 0 ( wait , queue: [] )
| - 2 ( free , queue: [] )
| - 3 ( free , queue: [] )
```

```
| - 0 ( crit , queue: [] )
  | - 1 ( free , queue: [] )
    | - 2 ( free , queue: [] )
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
|   | - 1 ( free , queue: [] )
|     | - 2 ( free , queue: [] )
|       | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
|   | - 1 ( free , queue: [] )
|     | - 2 ( free , queue: [] )
|       | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
|   | - 1 ( free , queue: [] )
|     | - 2 ( free , queue: [] )
|       | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
|   | - 1 ( free , queue: [] )
|     | - 2 ( free , queue: [] )
|       | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
  | - 1 ( free , queue: [] )
    | - 2 ( free , queue: [] )
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )
  | - 1 ( free , queue: [] )
    | - 2 ( free , queue: [] )
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )  
  | - 1 ( free , queue: [] )  
    | - 2 ( free , queue: [] )  
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )  
  | - 1 ( free , queue: [] )  
    | - 2 ( free , queue: [] )  
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )  
  | - 1 ( free , queue: [] )  
    | - 2 ( free , queue: [] )  
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )  
  | - 1 ( free , queue: [] )  
    | - 2 ( free , queue: [] )  
      | - 3 ( free , queue: [] )
```

```
| - 0 ( free , queue: [] )  
  | - 1 ( free , queue: [] )  
    | - 2 ( free , queue: [] )  
      | - 3 ( free , queue: [] )
```

```
| - 2 ( crit , queue: [-3] )  
  | - 1 ( done , queue: [] )  
    | - 0 ( done , queue: [] )  
      | - 3 ( done , queue: [] )
```

```
| - 2 ( done , queue: [] )  
  | - 1 ( done , queue: [] )  
    | - 0 ( done , queue: [] )  
      | - 3 ( done , queue: [] )
```