DS PROJECT

Submitted by

Aleena Liju

IMscCS(DA)

Roll No.4

PRINTER SPOOLER

Printer spooler is a small application that manages paper printing jobs sent from a computer to a printer or print server.It enables storing multiple print jobs within a print queue or a buffer where it is retrieved by the printer or print server.

C program to implement Printer Spooler

```
 #include<stdio.h>
#include<stdlib.h>
#define size 5;
int front=-1, rear=-1;
int queue[5] = {'a', 'a', 'a', 'a', 'a'};

void insert(){
    printf("Enter the element to insert:\n");
    int temp;
    scanf("%d", &temp);
    if ((front == 0 && rear == 4) || (front == rear + 1)){
        printf("No more slot to print\n");
    }
    else{
        if (rear == -1){
            front = 0;
            rear = 0;
        }
```

```
        else if(rear == 4){
            rear = 0;
        }
        else{
            rear++;
        }
        queue[rear] = temp;
        printf("Item inserted to Print Successfully!\n");
    }
}

void delete(){
    if (front == -1){
         printf("No print orders to delete\n");
    }
    else{
        int item = queue[front];
        queue[front] = 'a';
        if (front == rear){
            front = -1;
            rear = -1;
        }
        else if(front == 4){
            front = 0;
        }
```

```
        else{
            front++;
        }
        printf("%d Deleted from print orders!\n", item);
    }
}

void print(){
        int i;
    printf("Displaying Printer status:\n");
    for ( i = 0; i < 5; i++){
        if (queue[i] == 'a')
            printf("_ ");
            else
            printf("%d ", queue[i]);
    }
    printf("\n");
}

int menu(){

    int choice;
    printf("\n----Menu----\n");
    printf("1. Insert copies\n");
    printf("2. Delete print order\n");
```

```
    printf("3. Show printer status\n");
    printf("4. Exit Program\n");
    printf("Enter choice:\n");
    scanf("%d", &choice);
    return choice;
}
int processarray()
{
        int choice;
        for(choice=menu();choice!=5;choice=menu())
        {
                switch(choice)
                {
                        case1:
                                insert();
                                break;
                        case2:
                                delete();
                                break;
                        case3:
                                print();
                                break;
                        case4:
                                exit(0);
                                break;
```

```
                    default:
                    printf("invalid choice");
                    break;
                }
        }
}
   int main()
   {
       processarray();
       return 0;

}
```

OUTPUT

```
----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
1

Enter the element to insert:
5
Item inserted to Print Successfully!

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
1

Enter the element to insert:
4
Item inserted to Print Successfully!

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
1

Enter the element to insert:
9
Item inserted to Print Successfully!

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
1
```

```
Enter choice:
1

Enter the element to insert:
10
Item inserted to Print Successfully!

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
1

Enter the element to insert:
7
Item inserted to Print Successfully!

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
2

5 Deleted from print orders!

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
4. Exit Program
Enter choice:
3

Displaying Printer status:
_ 4 9 10 7

----Menu----
1. Insert copies
2. Delete print order
3. Show printer status
```