LINEAR QUEUE (WEEK 3)

By V. Kenny Philip

```
#include <stdio.h>
# define size 3
void insert();
void delete1();
void dispaly();
int array[size];
int Rear = - 1, Front = - 1;
main()
{
   int choice;
   while (1)
   {
      printf("\n1.insert\n2.delete\n3.Display\n4.Exit\n");
      printf("\nEnter your choice:\n");
      scanf("%d", &choice);
      switch (choice)
      {
         case 1:
         insert();
         break;
         case 2:
         delete1();
         break;
         case 3:
         display();
         break;
         case 4:
         exit(0);
```

```
            default:
            printf("\nIncorrect choice \n");
        }
    }
}

void insert()
{
    int item;
    if (Rear == size- 1)
       printf("\nqueue overflow \n");
    else
    {
        if (Front == - 1)

        Front = 0;
        printf("\nenter element to be inserted:\n ");
        scanf("%d", &item);
        Rear = Rear + 1;
        array[Rear] = item;
    }
}

void delete1()
{
    if (Front == - 1 || Front > Rear)
    {
        printf("\nqueue underflow\n");
        return ;
    }
    else
```

```
    {
        printf("\nElement deleted is: %d\n", array[Front]);
        Front = Front + 1;
    }
}

void display()
{
    int i;
    if (Front == - 1)
        printf("\nEmpty Queue\n");
    else
    {
        printf("\nQueue:\n");
        for (i= Front; i <= Rear; i++)
            printf("%d ",array[i]);
        printf("\n");
    }
}
```

OUTPUT

```
1.insert
2.delete
3.Display
4.Exit

Enter your choice:
1

enter element to be inserted:
 30

1.insert
2.delete
3.Display
4.Exit

Enter your choice:
1

queue overflow

1.insert
2.delete
3.Display
4.Exit

Enter your choice:
3

Queue:
10 20 30

1.insert
2.delete
3.Display
4.Exit

Enter your choice:
2

Element deleted is: 10

1.insert
2.delete
3.Display
4.Exit

Enter your choice:
2

Element deleted is: 20

1.insert
2.delete
3.Display
4.Exit

Enter your choice:
```