**Problem Statement:**  
In a VRL bus ,the front seats should be provided for the old age passengers and the rest all seats are to occupied for others based on their ages .Using queues

**CODE:**

#include<stdio.h>

#include<stdlib.h>

#define x 5

struct queue

{

int data[x];

int rear;

int front;

};

void enqueue(struct queue \*q,int a);

int dequeue(struct queue \*q);

void display(struct queue \*q);

void main()

{

struct queue q\_var,\*q;

q=&q\_var;

q->rear=q->front=-1;

int ch,age;

while(1)

{

printf("\nEnter:\n 1:Enqueue\t 2:Display\t 3:Exit\n");

scanf("%d",&ch);

switch(ch)

{

case 1:printf("\nEnter the age of a passenger\n");

scanf("%d",&age);

enqueue(q,age);

break;

case 2:display(q);

break;

case 3:exit(0);

default:printf("Invalid choice\n");

break;

}

}

}

void enqueue(struct queue \*q,int a)

{

int i;

if(q->rear==x-1)

{

printf("Queue overflow\n");

}

else if(q->rear==-1 && q->front==-1)

{

q->rear=q->front=0;

q->data[q->rear]=a;

}

else

{

i=q->rear;

q->rear++;

while(i>=0 && q->data[i]<=a)

{

q->data[i+1]=q->data[i];

i--;

}

q->data[i+1]=a;

}

}

void display(struct queue \*q)

{

int i;

if(q->front==-1 && q->rear==-1)

{

printf("Queue is empty\n");

}

else

{

printf("Age of passengers in descending sequence\n");

for(i=q->front;i<=q->rear;i++)

{

printf("%d \n",q->data[i]);

}

printf("\n");

}

}

EXCECUTION:

