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| /\* Queues are frequently used in computer programming, and a typical example is the creation of a job queue by an operating system. |
| If the operating system does not use priorities, then the jobs are processed in the order they enter the system. |
| Write C++ program for simulating job queue. Write functions to add job and delete job from queue. |
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| #include <iostream> |
| #define MAX 10 |
| using namespace std; |
| struct queue |
| { int data[MAX]; |
| int front,rear; |
| }; |
| class Queue |
| { struct queue q; |
| public: |
| Queue(){q.front=q.rear=-1;} |
| int isempty(); |
| int isfull(); |
| void enqueue(int); |
| int delqueue(); |
| void display(); |
| }; |
| int Queue::isempty() |
| { |
| return(q.front==q.rear)?1:0; |
| } |
| int Queue::isfull() |
| { return(q.rear==MAX-1)?1:0;} |
| void Queue::enqueue(int x) |
| {q.data[++q.rear]=x;} |
| int Queue::delqueue() |
| {return q.data[++q.front];} |
| void Queue::display() |
| { int i; |
| cout<<"\n"; |
| for(i=q.front+1;i<=q.rear;i++) |
| cout<<q.data[i]<<" "; |
| } |
| int main() |
| { Queue obj; |
| int ch,x; |
| do{ cout<<"\n 1.Insert Job\n 2.Delete Job\n 3.Display\n 4.Exit\n Enter your choice : "; |
| cin>>ch; |
| switch(ch) |
| { case 1: if (!obj.isfull()) |
| { cout<<"\n Enter data : \n"; |
| cin>>x; |
| obj.enqueue(x); |
| cout<<endl; |
| } |
| else |
| cout<< "Queue is overflow!!!\n\n"; |
| break; |
| case 2: if(!obj.isempty()) |
| cout<<"\n Deleted Element = "<<obj.delqueue()<<endl; |
| else |
| { cout<<"\n Queue is underflow!!!\n\n"; } |
| cout<<"\nRemaining Jobs : \n"; |
| obj.display(); |
| break; |
| case 3: if (!obj.isempty()) |
| { cout<<"\n Queue contains : \n"; |
| obj.display(); |
| } |
| else |
| cout<<"\n Queue is empty!!!\n\n"; |
| break; |
| case 4: cout<<"\n Exiting Program....."; |
| } |
| }while(ch!=4); |
| return 0; |
| } |
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