

ASSIGNMENT-04

```
#Include <iostream>
using namespace std;

class Node {
public:
    string task_name;
    int priority;
    int exe_time;
    Node* next;

    // Constructor
    Node(string task, int p, int t) {
        task_name = task;
        priority = p;
        exe_time = t;
        next = nullptr;
    }

    void display() {
        cout << "Task Name: " << task_name << " with priority " << priority << " "<< "is scheduled for
execution \n";

        cout << "-----\n";
    }
};

int main()
{
    int n;
    string task_name;
    int priority; int exe_time;
    Node* header=NULL, *temp=NULL, *t, *cur, *prev;

    cout<<"enter how many nodes you want to insert"<<endl;
    cin>>n;
    for(int i=0;i<n;i++)
    {

        cout<<"enter task name"<<endl;
```

```

cin>>task_name;
cout<<"task priortiy"<<endl;
cin>>priority;
cout<<"enter excution time"<<endl;
cin>>exe_time;

//creating new node
if(header==NULL)
{
header=new Node(task_name,priority,exe_time);
}
else
{
temp= new Node(task_name,priority,exe_time);

//linking the nodes
//inserting nodes at end

//t=header;
//attach temp node before header :inserting at beginning
if(header->priority < temp->priority)
{
temp->next=header;
header=temp;
}
//insertion at any point in linked list
else{
prev=header;
cur=header->next;
if(cur==NULL)
{
header->next=temp;
}
else{
while(cur->next!=NULL||cur->priority>temp->priority)
{
prev=cur;
cur=cur->next;
if(cur==NULL)
{
break;
}
}
}
//insertion at end
if(cur==NULL&& prev->priority>temp->priority)
{
prev->next=temp;
}
else{
temp->next=cur;
prev->next=temp;
}
}

```

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    }
}
}

} //linked

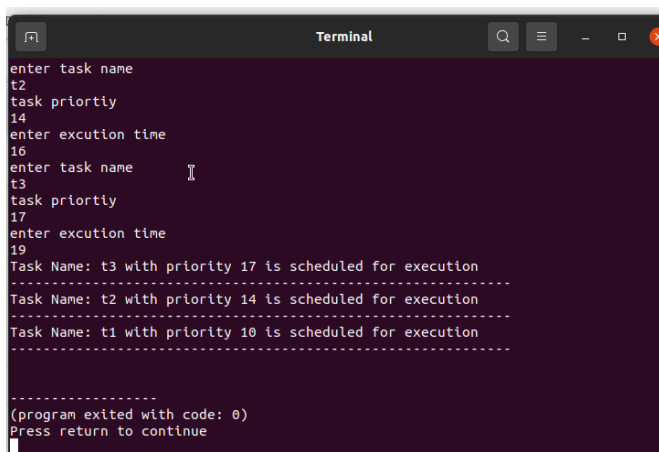
//for displaying linked list
t=header;

while(t!=NULL)
{
t->display();
t=t->next;
}
return 0;

}

```

OUTPUT:



```

Terminal
enter task name
t2
task priority
14
enter excution time
16
enter task name
t3
task priority
17
enter excution time
19
Task Name: t3 with priority 17 is scheduled for execution
-----
Task Name: t2 with priority 14 is scheduled for execution
-----
Task Name: t1 with priority 10 is scheduled for execution
-----
-----
(program exited with code: 0)
Press return to continue

```

GITHUB: