**VARUN KUMAR**

**2K19-IT-140**

**OOP LAB – 12**

**Create a student class which can accept marks as int/float/grades.**

**Student**

**----marks**

**----roll number**

**Perform a sort function based on their marks. Implement exception handling within.**

**#include<iostream>**

**using namespace std;**

**template <class T>**

**class student**

**{**

**T marks[5];**

**int rollno;**

**string name;**

**public:**

**student(int r,string s)**

**{**

**rollno = r;**

**name = s;**

**cout<<"Name : "<<name<<endl;**

**cout<<"Roll no : "<<rollno<<endl;**

**}**

**void get\_marks()**

**{**

**for(int i = 0; i < 5; i++)**

**{**

**cin>>marks[i];**

**}**

**try**

**{**

**for(int i = 0;i< 5; i++)**

**{**

**if(marks[i]<0)**

**{**

**throw marks[i];**

**}**

**}**

**sort\_marks();**

**print\_marks();**

**}**

**catch(T m)**

**{**

**cout<<"Marks cannot be negative "<<m<<endl;**

**}**

**}**

**void sort\_marks()**

**{**

**for (int i = 0; i < 5; i++)**

**{**

**for (int j = i+1; j < 5; j++)**

**{**

**if (marks[i] > marks[j])**

**{**

**T temp;**

**temp = marks[i];**

**marks[i] = marks[j];**

**marks[j] = temp;**

**}**

**}**

**}**

**}**

**void print\_marks()**

**{**

**cout<<"sorted marks = ";**

**for (int i = 0; i < 5; i++)**

**{**

**cout<<marks[i]<<" ";**

**}**

**cout<<endl;**

**}**

**};**

**int main(){**

**student<int> I(49,"VARUN");**

**cout<<"Enter integer marks: ";**

**I.get\_marks();**

**cout<<endl;**

**student<float> F(35,"RAHUL");**

**cout<<"Enter floating marks: ";**

**F.get\_marks();**

**cout<<endl;**

**student<char> G(55,"VANSH");**

**cout<<"Enter grades: ";**

**G.get\_marks();**

**return 0;**

**}**



