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ROLL NO: COSA19

ASSIGNMENT NO:2

```
#include <iostream>
using namespace std;
#include<string.h>
#include<ctime>
class age;
class student
{
friend class age;
private:
char *name,*blood,*address;
int db;
long int insurance,telno,license;
float height,weight;
static int count;
public:
student()
{
count++;
cout<<"----------------------Default Information----------------";
name=new char[13];
strcpy(name,"Atharva");
blood=new char[3];
strcpy(blood,"AB+");
address=new char[20];
strcpy(address,"Natepute");
insurance=12345;
telno=9890534;
license=1234567;
height=6.3;
weight=70;
db=2004;
display();
}
```

```
student(char n[],char bl[],char add[],int yy,long int insu,long int teln,long int li,float
h,float w)
{
count++;
int len;
len=strlen(n);
name=new char[len+1];
strcpy(name,n);
len=strlen(bl);
blood=new char[len+1];
strcpy(blood,bl);
len=strlen(add);

address=new char[len+1];
strcpy(address,add);
db=yy;
insurance=insu;
telno=teln;
license=li;
height=h;
weight=w;
}
void display();
student & compare(student *x1)
{
if(x1->height>height)
{
return *x1;
}
else
{
return *this;
}
}
static int displaycount()
```

```
{
cout<<"\nNumber of entries are :"<<count<<endl;
}
~student()
{
cout<<"Destructor called";
}
};
class age
{
private:
int age,date;
public:
void calculate(student *x)
{
date=x->db;
age=2023-date;
cout<<"\n AGE :"<<age<<endl;
}
};
int student::count=0;
void student::display()
{
cout<<"\n STUDENT NAME :"<<name;
cout<<"\n BLOOD GROUP :"<<blood;
cout<<"\n DATE OF BIRTH :"<<db;
cout<<"\n ADDRESS :"<<address;
cout<<"\n INSURANCE NUMBER :"<<insurance;
cout<<"\n TELEPHONE NUMBER :"<<telno;
cout<<"\n LICENSE NUMBER :"<<license;
cout<<"\n Height :"<<height;
cout<<"\n Weight :"<<weight;

}
int main() {
```

```
int ch;
student *s[20],*temp;
age *a[20];
char sname[15],sblood[5],saddress[20];
long int sinsurance,stelno,slicense;
float sheight,sweight;
int cnt=0,dd;
while(true)
{
cout<<"\n-----------------MENU----------------";
cout<<"\n 1.DEFAULT CONSTRUCTOR";
cout<<"\n 2.PARAMETERIZED CONSTRUCTOR";
cout<<"\n 3.NUMBER OF ENTRIES";
cout<<"\n 4.CALCULATE AGE";
cout<<"\n 5.TALLER STUDENT";
cout<<"\n 6.EXIT";
cout<<"\n ENTER THE CHOICE :";
cin>>ch;
switch(ch)
{
case 1:
s[cnt]=new student();
a[cnt]=new age();
cnt=cnt+1;
break;
case 2:
cout<<"\n ENTER THE STUDENT DATA";
cout<<"\n ENTER THE STUDENT NAME :";
cin>>sname;
cout<<"\n ENTER THE STUDENT BLOOD GROUP :";
cin>>sblood;
cout<<"\n ENTER THE DATE OF BIRTH :";
cin>>dd;
cout<<"\n ENTER THE STUDENT ADDRESS :";
cin>>saddress;
```

```
cout<<"\n ENTER THE INSURANCE NUMBER :";
cin>>sinsurance;
cout<<"\n ENTER THE TELEPHONE NUMEBR :";
cin>>stelno;
cout<<"\n ENTER THE LICENSE NUMBER :";
cin>>slicense;
cout<<"\n ENTER THE STUDENT HEIGHT :";
cin>>sheight;
cout<<"\n ENTER THE STUDENT WEIGHT :";
cin>>sweight;
s[cnt]=new student(sname,sblood,saddress,sinsurance,
dd,stelno,slicense,sheight, sweight);
a[cnt]=new age();
cnt=cnt+1;

break;
case 3:
student::displaycount();
break;
case 4:
for(int i=0;i<cnt;i++)
{
s[i]->display();
a[i]->calculate(s[i]);
}
break;
case 5:
for(int j=0;j<cnt;j++)
{
temp = &temp->compare(s[j]);
}
cout<<"\n----------TALLER STUDENT INFORMATION----------"<<endl;
temp->display();
break;
case 6:
```

```
exit(0);
}
}
return 0;
}
```