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Completed Programs

Student - new Operator Overloading (Id-13862)

The program must accept the **name**, **registration number** and **department** (branch) of a student and print the details as shown in the Example Input/Output section. Please overload the **new** operator in the class **Student** so that the program runs successfully.

Example Input/Output 1:

Input:

Mr.Abcd

2020CSE112

CSE

Output:

Name:Mr.Abcd

RegistrationNumber:2020CSE112

Department:CSE

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2212046@nec

9-Oct-2023 14:42:08

DINESHRAM A

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CSE

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

class Student
{
    string name;
    string regnNumber;
    string department;

public:
    Student()
    {
    }
    Student(string name, string regnNumber, string department)
    {
        this->name=name;
    }
}
```

```
this->regnNumber=regnNumber;
        this->department=department;
    }
    void* operator new(size t size)
void *p=::operator new(size);
return p;
    }//end of void* operator new(size t size)
    void printDetails()
        cout << "Name:"<<this->name<<endl;</pre>
        cout << "RegistrationNumber:"<<this->regnNumber<<endl;</pre>
        cout << "Department:"<<this->department<<endl;</pre>
    }
};
int main()
    string studentName,regnNum,dept;
    cin >> studentName >> regnNum >> dept;
    Student *stud=new Student(studentName,regnNum,dept);
    stud->printDetails();
    return 0;
}
```

Student Age - new Operator Overloading (Id-13863)

The program must accept the **name**, **registration number** and **department** (branch) of a student and print the details as shown in the Example Input/Output section. The program must set the age of all students as 20. Please overload the **new** operator in the class **Student** so that the program runs successfully.

Example Input/Output 1:

```
Input:
Mr.Abcd
2020CSE112
CSE
```

Output:

Name:Mr.Abcd RegistrationNumber:2020CSE112 Department:CSE

Age:20

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```
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```

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CSE

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

```
class Student
    string name;
    string regnNumber;
    string department;
    int age;
public:
    Student()
    {
    Student(string name, string regnNumber, string department)
        this->name=name;
        this->regnNumber=regnNumber;
        this->department=department;
    }
    void* operator new(size t size)
void *p=::operator new(size);
    ((Student *)p)->age=20;
    return p;
    }//end of void* operator new(size t size)
    void printDetails()
        cout << "Name:"<<this->name<<endl;</pre>
        cout << "RegistrationNumber:"<<this->regnNumber<<endl;</pre>
        cout << "Department:"<<this->department<<endl;</pre>
        cout << "Age:"<<this->age<<endl;</pre>
    }
};
int main()
    string studentName,regnNum,dept;
    cin >> studentName >> regnNum >> dept;
    Student *stud=new Student(studentName,regnNum,dept);
    stud->printDetails();
    return 0;
}
```

Student - delete Operator Overloading (Id-13864)

The program must accept the **name**, **registration number** and **department** (branch) of a student and print the details as shown in the Example Input/Output section. Please overload the **delete** operator in the class **Student** so that the program runs successfully.

Example Input/Output 1:

Input:

```
Mr.Abcd
2020CSE112
CSE
Output:
Name:Mr.Abcd
RegistrationNumber:2020CSE112
Department:CSE
  Show My Solution
              9-Oct-2023 14:57:44
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                                DINESHRAM A
                                              2212046
#include <iostream>
using namespace std;
class Student
     string name;
     string regnNumber;
     string department;
public:
     Student()
     {
     }
     Student(string name, string regnNumber, string department)
         this->name=name;
         this->regnNumber=regnNumber;
         this->department=department;
     }
     void printDetails()
         cout << "Name:"<<this->name<<endl;</pre>
         cout << "RegistrationNumber:"<<this->regnNumber<<endl;</pre>
         cout << "Department:"<<this->department<<endl;</pre>
     }
     void* operator new(size_t size)
         void *ptr=::new Student();
         return ptr;
     }
     void operator delete(void* ptr)
 ((Student *)ptr)->printDetails();
free(ptr);
     }//end of void operator delete(void* ptr)
};
int main()
```

```
string studentName,regnNum,dept;
cin >> studentName >> regnNum >> dept;
Student *stud=new Student(studentName,regnNum,dept);
delete stud;
return 0;
}
```