

Classes and Objects-Easy(1)

Aim:

Suppose you have a piggy bank with an initial amount of 50 rupees and you have to add some more money to it.

Create a class named **AddAmount** with a data member holding the initial amount of Rs. 50. Now make two constructors for this class as follows:

- 1 - without any parameter - no amount will be added to the piggy bank
- 2 - having a parameter which is the amount that will be added to the piggy bank Create an object for the class and display the final amount in the piggy bank.

Source Code:

```
#include <iostream>

using namespace std;

#include <iostream>

using namespace std;

class AddAmount{
    public:
    int bank=50;
    AddAmount(){
        bank=bank+0;
    }
    AddAmount(int amount){
        bank=bank+amount;
    }
    void print_amount(){
        cout<<bank;
    }
};

int main()
{
    AddAmount a1;

    int amt;

    cin>>amt;

    AddAmount a2(amt);
```

```
a2.print_amount();
```

```
return 0;
```

Input / Output:

Input 1 :

400

Output 1 :

450

Input 2 :

250

Output 2 :

300

Classes and Objects-Easy(2)

Aim:

Rathish is developing a simple program to determine whether a given character is a vowel or a consonant. He wants to create a class named VoC that takes a character as input and has a method to determine if this character is a vowel or a consonant.

Source Code:

```
#include <iostream>

using namespace std;

class VoC{
    public:
    char k;
    VoC(char ch){
        k=ch;
    }
    string checkAlpha(){

        if(k=='a' || k=='e' || k=='i' || k=='o' || k=='u'){
            return "Vowel";
        }
        else{
            return "Consonant";
        }

    }
};

int main() { char c;
cin >> c; VoC voc(c);
cout << c << " : " << voc.checkAlpha(); return 0;
}
```

Input / Output:

Input 1: j	Output 1: j : Consonant
Input 2: e	Output 2: e : Vowel

Classes and Objects-Medium(1)

Aim:

Jai and Rekha once went to college. The students of that college were doing software in which they entered student name, rollNo, and total mark out of 500. It should display the entered details along with the percentage. Create a class Student which has getdetails() as a method that gets the inputs and prints the appropriate details.

Source Code:

```
#include <iostream> #include <cstring>

using namespace std;

class student{
    public:
    char name1[30];
    int rollNo;
    int totalm;
    int perc;
    void setDetails(const char* s, int roll, int total){
        strcpy(name1,s);
        rollNo=roll;
        totalm=total;
        perc=total/5;
    }
    int getFlag(){
        if (totalm>500){
            cout<<"Total marks are out of 500";
            return 1;
        }
        else {

            return 0;
```

```

    }
}

void displayDetails(){

    cout<<"Student details:\n";

    cout<<"Name "<<"RollNo "<<"Total "<<"Percentage\n";

    cout<<name1<<" "<<rollNo<<" "<<totalm<<" "<<perc;

}

};

int main() {
student stu;
char name[30];
int rollNo, total;
cin.getline(name, 30);
cin >> rollNo;
cin >> total;
stu.setDetails(name, rollNo, total);

if (stu.getFlag() == 0) {
    stu.displayDetails();
}

return 0;
}

```

Input / Output:

Input 1:

```

Janu
23
468

```

Output 1:

```

Student details:
Name    RollNo  Total  Percentage
Janu    23    468    92

```

Input 2:

```

Shri
34
598

```

Output 2:

```

Total marks are out of 500

```

