

## VIT - Vellore

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### BCSE102P\_Structured and Object Oriented Programming Lab\_VL2024250502354

#### VIT V\_Structured and OOP\_Lab 5\_COD\_Easy\_Class Objects

Attempt : 1  
Total Mark : 20  
Marks Obtained : 20

#### Section 1 : Coding

##### 1. Problem Statement

Create a class A that takes an integer N as input and generates a sequence of N numbers where each number alternates between 1 and 6. The program should start with 1 and then repeatedly switch from 1 and 6 for N iterations, displaying each number in the sequence separated by a space.

Use class and objects to solve the program.

**Answer**

```
#include <iostream>
```

```
class A {
```

```

public:
    A(int n) : N(n) {}

    void generateSequence() {
        int current = 1;
        for (int i = 0; i < N; ++i) {
            std::cout << current << (i == N - 1 ? "" : " ");
            current++;
            if (current > 6)
                current = 1;
        }
        std::cout << std::endl;
    }

private:
    int N;
};

int main() {
    int n;
    std::cin >> n;
    A obj(n);
    obj.generateSequence();
    return 0;
}

```

**Status :** Correct

**Marks :** 10/10

## 2. Problem Statement

Bhuvi is studying geometry, and she wants to determine the type of a triangle based on its side lengths. She needs your help to write a program using a class Triangle that can classify triangles as equilateral, isosceles, or scalene.

Equilateral triangle - All sides are equal

Isosceles triangle - Any two sides are equal

Scalene triangle - All sides are different

**Answer**

```
#include<iostream>
using namespace std;
class triangle{
public:
void check(){
    int n,k,m;
    cin>>n>>k>>m;
    if(n==k &&k==m){
        cout<<"Equilateral triangle";
    }else if(n!=k&&k!=m&&n!=m){
        cout<<"Scalene triangle";
    }else{
        cout<<"Isosceles triangle";
    }
}
};
int main(){
    triangle t;
    t.check();
    return 0;
}
```

**Status :** Correct

**Marks :** 10/10