CS261 LAB8

Team members: Section:2B

Dipean Dasgupta   Roll:202151188

Shubham Mehatre   Roll:202152323

Piyusha Gupta   Roll:202152331

Tanmay Meshram   Roll:202152341

Task 1: Does the below code prints "Hi…." on the console? If yes, how many times?

1. Does the below code prints "Hi…." on the console? If yes, how many times?

```
class X
{
   static
   {
       Y.methodOfY();
   }
}

class Y extends X
{
   static void methodOfY()
   {
       System.out.println("Hi....");
   }
}

public class MainClass
{
   public static void main(String[] args)
   {
       Y.methodOfY();
   }
}
```

OUTPUT:

```
D:\Java\OOPCS261> cmd /C ""C:\Users\Asus\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.2.8-hotspot\bin\java.exe" -XX:+Sh
owCodeDetailsInExceptionMessages -cp C:\Users\Asus\AppData\Roaming\Code\User\workspaceStorage\5fc802891934e60723553e724a168
e96\redhat.java\jdt_ws\OOPCS261_f20eaae1\bin MainClass "
Hi....
Hi....
```

"Hi" is printed 2 times

Task 2: Create two classes named Mammals and MarineAnimals. Create another class named BlueWhale which inherits both the above classes. Now, create a function in each of these classes which prints "I am mammal", "I am a marine animal" and " I belong to both the categories: Mammals as well as MarineAnimals" respectively.

Now, create an object for each of the above class and try calling:

1. Function of Mammals by the object of Mammal

2. Function of MarineAnimals by the object of MarineAnimal

3. Function of BlueWhale by the object of BlueWhale

4. Function of each of its parent by the object of BlueWhale

Solution Code: (in C++)

```cpp
include<bits/stdc++.h>

using namespace std;
class Mammals
{
    public: void printMammals()
    {
        cout<<"I am mammal"<<endl;
    }
};

class MarineAnimals
{
    public: void printMarineAnimals()
    {
        cout<<"I am Marine Animal"<<endl;
    }
};

class BlueWhale : public Mammals, public MarineAnimals
{
    public: void printBlueWhale()
    {
        cout<<"I belong to both categories:"<<endl;
        cout<<"Mammals as well as Marine Animals"<<endl;
    }
};

int main()
{
```

```
    Mammals m;
    MarineAnimals ma;
    BlueWhale bw;

    m.printMammals();
    ma.printMarineAnimals();
    bw.printBlueWhale();
    cout<<endl;
    bw.printMammals();
    bw.printMarineAnimals();
}
```

OUTPUT:

```
[Running] cd "d:\Java\" && g++ lab.08.cpp -o lab.08 && "d:\Java\"lab.08
I am mammal
I am Marine Animal
I belong to both categories:
Mammals as well as Marine Animals

I am mammal
I am Marine Animal

[Done] exited with code=0 in 1.999 seconds
```