Test No. 1
Programming in Java, Summer 2022

21/06/2022

Q1. What is the the result after execution of following expressions in Java?

(a) int n = 4, m = 6, p = 5;
     n += m % p + 2;

(b) int p = 2, n = 4;
     int k = n << p;

Q2. What will be the output of the following code

```java
class A{
    static { System.out.println("Third"); }
}
class B extends A{
    static { System.out.println("Second"); }
}
class C extends B{
    static { System.out.println("First");  }
}
public class X{
    public static void main(String args[]){
        C obj = new C( );
    }
}
```

Q3. Rewrite the following statements using ternary operator

```
if (num != 0){
    result = 100 / num;
else
    result = 0;
```

Q4. Given the following hierarchy of classes

class Alpha{....}
class Beta extends Alpha{....}
class Gamma extends Beta{....}

In what order are the constructors called when "Gamma" object is instantiated?

Q5. Write a method called sum() that takes a variable number of integer arguments and returns sum of arguments as integer value.

Q6. How can a protected member of a class can be accessed by its subclasses in a different package? Illustrate with an example?

Q7. Given a superclass shape as shown below:

```
class shape{
    void show(){
        System.out.println("Superclass show");
    }
}
```

Create two subclasses rectangle and triangle. Override method show() and Illustrate dynamic method dispatch.