**2/5/2022 Homework**

**Regina Biktimirova batch 4**

**What is binary code?**

Binary is a numeric system that only uses two digits, 0 and 1 (or on and off)

Computers operate in binary, meaning they store data and perform calculations using only zeros and ones.

**What is ASCII and why we use it?**

ASCII Code – American Standard Code for Information Interchange. It can be used to convert each letter into Binary Code or all the WAY around. Every letter, number, and special characters are represented by numbers in ASCII code

**Convert your name into binary code**

Regina R(82) e(101) g(103) i(105) n(110) a(97)

010100100110010101100111011010010110111001100001

**What is java and javac and how they work with each other?**

Javac stands for java compiler. Javac is used to compile source code.

Java - is object oriented programming language. Java is used to execute compiled form.

**Please explain main() method in Java**

It is one of the most important methods of Java. Technically, the main method tells Java (JVM) where the starting point of the program will be. Without main method program will not run. JVM always look for this method signature to start running an application

**Please explain what is source code, byte code, and binary code and what are their differences**

Source Code - is a code that is written in any programming language.

Byte Code - The code that we can see only in Java

Binary Code - (or Machine Code) is a code of ones and zeros

The difference between these codes is their order in Java.

**Please explain Java and its architecture – components of Java**

JDK – Java Development Kit. JDK = JRE + JVM + Development Tools

JDK allows us to create JAVA programs

JRE – Java Runtime Environment. JRE = JVM + Java Class Library

JRE contains all the inbuilt packages and libraries

JVM – Java Virtual Machine. JVM is where actual codes run

JVM is platform dependent. JVM contains JIT

JIT – Just In Time compiler. JIT increased the speed of execution

**Explain why Java is platform independent**

“Write once Run Everywhere!”

Java can be used on any platform (Mac, Windows, etc)

**Explain what Object-Oriented Programming means**

Java puts real life objects to work. The hardware is the body and Java programming language is THE SOUL.