**Task 1: Questions and answers**

1. **Explain what is computer programming in your own language? What is the use of compiler or interpreter?**

**Answer:**

Computer programming: is a process of designing or writing instructions for the computer thus the computer will execute those instructions.

In a more formal way, Computer programming/coding is a process of designing and building an executable computer program to accomplish a specific computer result.

The use of Compiler/Interpreter:

Computer only understands machine (binary) language; therefore we need the interpreter or compiler to interpret our codes to machine language.

Java compiler > converts the codes to machine language so that the machine can understand the instructions. Same for Python interpreter.

Every programming language has its own compiler/interpreter.

1. **Why we do automation? When it is important to do automation testing?**

**Answer:**

Basically we do automation to speed up the manual process. This makes it more cost and time effective. But also we want to enhance our test coverage area. With Automation tests can be run as many times required and tested with numerous amounts of test data.

Automation testing is required for:

* Repetitive tests that run for multiple builds, Ex: Smoke, Sanity, Regression tests
* Test that are impossible to perform manually, Ex: Performance Test
* Test that require multiple data sets,
* Test that take a lot of time and effort when manual testing,
* Test that run on several different hardware and software, Ex: Compatibility Tests
* Frequently used functionality that introduces high risk conditions

1. **What are variables in java, what are datatypes? What kind of datatype you are familiar and what kind of data those variables can store?**

**Answer:**

A variable is a ‘place holder’ or memory location where you can store your data. To store any data a variable must be declared.

For example: To create an integer type of variable named ‘x’,

**int x;** this is called declaring a variable, x here is a place holder/memory location where we can store any (whole) number. X=10; this is called initialize the variable.

Therefore **int x=10;**

Data type: means the type of data we want to store in the computer. There are different types of data in java. Such as:

* **integer(int)** = whole numbers, no decimal, it can range from 1-65000
* **char**= single character. Ex: a, b, c…
* **double/float**= includes decimal. Ex: 40.1
* **String**= set of character/name. Ex: “rusalina”
* **boolean**= conditional statement, only takes 2 values. Ex: true/false, if/else

\*each datatype comes with a range.

1. **What is jdk, why we need jdk in our computer?**

**Answer:**

JDK is a java compiler that interprets the programming language into computer language. It stands for “Java Development kit”.

It has two components:

1. JRE (Java Runtime Environment)
2. Java Basic/core Library.

JDK (Java Development Kit)

Java Basic/core Library

JRE ( Java Runtime Environment)

Required to run any java software in the computer.

Required to write our own code.

1. **What is eclipse, why we use eclipse?**

**Answer:**

Eclipse is a programming editor that we use to write programming language. It is also called IDE- Integrated Development Environment). It is intelligent software that is also able to recognize any syntax error.

**6. What is a Boolean variable, how it is related with if/else condition?**

**Answer:**

**7. What is main method of java, and why it is important to use?**

**Answer:**

The main method of java is- **public** **static** **void** main(String[] args) {}

It is the starting point of the java code. In order to make the java class runnable we need the main method of java.