# Assignment-2

# Theory

1. What is conditional statement?

Ans: A conditional statement is a statement that computer programming language used to decide which code has to be run when the true condition is met or which code has not to be run when the true condition is not met.

The simplified ‘if’ statement so called Ternary operator is the best example for conditional statement.

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1. Write the syntax of switch case statement?

Ans:

switch (variable/expression) {

case value1:

// statements of case1

break;

case value2:

// statements of case2

break;

.. .. ...

.. .. ...

default:

// default statements

}

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1. Write the difference between break and continue statement?

Ans:

|  |  |
| --- | --- |
| Break | Continue |
| 1. Break leaves the loop completely and executes the statements after the loop. | 1. Whereas Continue leaves the current iteration and executes with the next value in the loop. |
| 1. break completely exits the loop. | 1. continue skips the statements after the continue statement and keeps looping. |
| 1. 'break' can be used with 'switch', 'label'. | 1. 'continue' cannot be executed with 'switch' and 'labels'. |

1. What is looping statement?

Ans: Looping statement are the statements execute one or more statement repeatedly several number of times. In java programming language there are three types of loops; while, for and do-while.

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1. Write the difference between while and do-while statement?

Ans:

|  |  |
| --- | --- |
| While | Do-While |
| 1. In Java While loop, the condition is tested at the beginning of the loop, and if the condition is True, then only statements in that loop will be executed. | 1. In Java Do While loop, the condition is tested at the end of the loop. |
| 1. The While loop executes the code block only if the condition is True. | 1. The Do While executes the statements in the code block at least once even if the condition Fails. |
| 1. Syntax:   while (Boolean expression) {  // Statements  } | | 1. Syntax:   do {  statement(s);  } while( condition ); |

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1. What is array? How it is created?

Ans: Arrays are used to store multiple values in a single variable, instead of declaring separate variables for each value. To declare an array, define the variable type with square brackets: String[] cars; We have now declared a variable that holds an array of strings.

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1. What is class?

Ans: A class is a user defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type.

In general, class declarations can include these components, in order:

**Modifiers:** A class can be public or has default access (Refer this for details).

**Class name**: The name should begin with a initial letter (capitalized by convention).

**Superclass (if any):** The name of the class’s parent (superclass), if any, preceded by the keyword extends. A class can only extend (subclass) one parent.

**Interfaces (if any):** A comma-separated list of interfaces implemented by the class, if any, preceded by the keyword implements. A class can implement more than one interface.

**Body:** The class body surrounded by braces, { }.

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1. What is constructor?

Ans: A constructor in Java is a special method that is used to initialize objects. The constructor is called when an object of a class is created.

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1. What is the use of copy constructor?

Ans: A copy constructor in a Java class is a constructor that creates an object using another object of the same Java class. That's helpful when we want to copy a complex object that has several fields, or when we want to make a deep copy of an existing object.

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1. What is the use of this keyword in java?

Ans: The “this” keyword refers to the current object in a method or constructor. The most common use of the “this” keyword is to eliminate the confusion between class attributes and parameters with the same name (because a class attribute is shadowed by a method or constructor parameter).

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1. What is method overloading?

Ans: Method Overloading is a feature that allows a class to have more than one method having the same name, if their argument lists are different. It is similar to constructor overloading in Java, that allows a class to have more than one constructor having different argument lists.

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1. What is static variable?

Ans: Static variable in Java is variable which belongs to the class and initialized only once at the start of the execution. It is a variable which belongs to the class and not to object (instance). Static variables are initialized only once, at the start of the execution.

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1. What is access modifier?

Ans: A Java access modifier specifies which classes can access a given class and its fields, constructors and methods. Access modifiers can be specified separately for a class, its constructors, fields and methods. Java access modifiers are also sometimes referred to in daily speech as Java access specifiers, but the correct name is Java access modifiers. Classes, fields, constructors and methods can have one of four different Java access modifiers:

* private
* default (package)
* protected
* public

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1. . Write the difference between instance and static methods?

Ans:

|  |  |
| --- | --- |
| Static methods | Instance methods |
| 1. These methods in java can be called without creating an object by class name. | 1. These methods in java can be accessed by creating the object |
| 1. They can be shared among all the objects from the class | 1. Every individual object created from the class has its own copy of the instance methods. |
| 1. Static methods cannot be overridden | 1. Instance methods can be overridden |

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1. What is object? How it is created?

Ans: Basically, an object is created from a class. In Java, the new keyword is used to create new objects. There are three steps when creating an object from a class −

* **Declaration** − A variable declaration with a variable name with an object type.
* **Instantiation** − The 'new' keyword is used to create the object.
* **Initialization** − The 'new' keyword is followed by a call to a constructor. This call initializes the new object.