Agenda

```
Language Basics
Coding Conventions
Widening
Narrowing
class
object
reference
Wrapper class
Boxing
unboxing
commandline arguments
Stream
Scanner class
```

Language Basics

Keyword

```
The words that are reserved in any programming language which have a
special meaning to it are called as Keywords
```

DataTypes

```
1. Primitive (Value Type)
2. Non Primitive (Reference Type)
```

Variable

```
A name given to the specific memory location is called as variable
int num1; // declaration
num1 = 10; // assignment
//int num1 = 10; // Initialization
```

Ternanry Operator

```
condition ? true : false
```

Loops (Demo02)

```
1. for
    for(exp1;exp2;exp3)
    - if the no of iterations are known then use for loop
2. while
    while(condition)
    - if the no of iterations are not known then use while loop
3. do..while
    do { }while(condition);
    - if you want to execute the loop once even when the condition is false
then use do..while loop
```

break statement (Demo03)

```
- if you want to stop the iterations then use the break statement
```

continue statement (Demo03)

```
- if you want to go for next iteration without executing the rest of the
statements inside the loop then use continue statement.
```

Coding conventions

```
1. Pascal Case
2. Camel Case
```

Widening (Demo04)

```
Putting the value of narrower type of data into wider type of data we call
it as widening
```

Narrowing (Demo04)

```
- Keeping the value of wider type of data in to narrower type is called as
narrowing
- At the time of narrowing thie is data loss
- Explict type casting is mandatory at the time of narrowing
```

Float & long conversion (Demo04)

```
Conversion of long into float is actually widening.
As the range of float is wider thant that of long their is no loss in this
conversion.
```

Class (Demo05 & Demo06)

```
Class is a blueprint of an object
Class is a logical entity
Class Consists of
    1. Fields (Variables Declared inside class)
    2. Methods (Functions declared inside class)
```

Object (Demo05 & Demo06)

```
- It is a physical entity
- It is also called as instance of a class
- Object defines 3 things
    1. State
        Fields of a class represents state of that object
    2. Behaviour
        Methods of a class represents behaviour of that object
    3. Identity
        Unique filed of class represents identity of object
        If unique field does not exists then address of that object
represents identity of that object
```

Reference (Demo05 & Demo06)

```
- Variable of a class is called as reference
- reference points to the instance of the class
```

Wrapper class

```
- Java have provided class for every primitive type of data.
- These classes are called as wrapper classes.
```

Boxing UnBoxing (Demo07 & cmd_line)

```
Converting the value of primitive to non primitive type is called as boxing
converting the value of reference type to value type is called as unboxing
```

Stream

```
Standard stream objects in java are
System.in
System.out
System.err
```

Scanner (Demo08)

```
It is present in java.util package
To create scanner class instance -
Scanner sc = new Scanner(System.in);
```

Lab Flow

1. 20 mins-> slides
2. 1 to 1 n 1/2 hrs -> classwork (implementation) (class,object,reference,Implement Scanner)
3. Solve the assignment