

Homework 3

Keywords

- Reserved words for **data types**:
 - byte
 - declare a variable as a numeric type. This ranges from -128 to 127.
 - short
 - to declare variables, contains minimum value of -32,768 and a maximum value of 32,767
 - int
 - declare a variable that can hold a 32-bit signed two's complement integer.
 - long
 - used to store 64-bit integer value
 - float
 - used to declare a variable which can store a floating point value.
 - double
 - declare a floating point variable as a numeric type, hold a 64-bit floating point number.
 - char
 - a data type that is used to store a single character
 - boolean
 - declare a floating point variable as a numeric type
- Reserved words for **flow control**:
 - if
 - a block of Java code to be executed if a condition is true
 - else
 - block of Java code to be executed if a condition is false
 - switch

- a multiple-branch statement that executes one statement from multiple conditions.
- case
 - a conditional label which is used with the switch statement.
 - e.g.

```

Java ▾
switch(number) {
  case 1 :
    System.out.println("1");
    break;
  case 2 :
    System.out.println("2");
    break;
}
Copy Caption ...

```

- default
 - an access modifier, If didn't assign any access modifier to variables/methods/constructors/classes by default, it is considered as default access modifier.
 - accessible within the package only.
- for
 - used for loop, it executes a block of statements until the boolean expression returns true.
- do
 - used in control statement to declare a loop. It provides a repetitive task as long as the condition specified with the while keyword is true; then it exits from the loop when the specified condition is founded as false.
- while
 - used to iterate a part of the program repeatedly until the specified Boolean condition is true.
- break
 - used to terminate loops and switch statements
- continue
 - used to skip the current iteration of a loop
- return

- used to exit from a method, with or without a value.
- Keywords for **modifiers**:
 - public
 - declares a member's access as public.
 - visible to all other classes
 - private
 - declares a member's access as private.
 - only visible within the class
 - protected
 - declared as protected can be accessed from: Within the same class.
Subclasses of same packages.
 - ~~static~~
 - ~~final~~
 - abstract
 - modify class: An abstract class is a restricted class that cannot be used to create objects
 - modify method: An abstract method can only be used in an abstract class, and it does not have a body.
 - synchronized
 - The process of allowing only a single thread to access the shared data or resource at a particular point of time
 - No other thread can enter into that synchronized block until the thread inside that block completes its execution and exits the block.
 - native
 - applied to a method to indicate that the method is implemented in native code using JNI
 - applicable only for methods, and we can't apply it anywhere else. The methods which are implemented in C, C++ are called native methods or foreign methods.
 - Native modifier indicates that a method is implemented in platform-dependent code, often in C.

- `strictfp`
 - used in java for restricting floating-point calculations and ensuring the same result on every platform while performing operations in the floating-point variable.
- `transient`
 - used to avoid serialization
 - if any object of a data structure is defined as a transient, then it will not be serialized. Serialization is the process of converting an object into a byte stream.
- `volatile`
 - used to modify the value of a variable by different threads.
 - used to make classes thread safe.
 - multiple threads can use a method and instance of the classes at the same time without any problem.
- Keywords for **exception handling**:
 - ~~`try`~~
 - ~~`catch`~~
 - ~~`finally`~~
 - ~~`throw`~~
 - ~~`throws`~~
 - `assert`
 - used to declare an expected boolean condition in a program.
 - If the program is running with assertions enabled, then the condition is checked at runtime. If the condition is false, the Java runtime system throws an `AssertionError`.
- **Class** related keywords:
 - `class`
 - a collection of related variables and/or methods.
 - `package`
 - declares a 'name space' for the Java class.
 - mechanism to encapsulate a group of classes, sub *packages* and interfaces.

- import
 - used to make the classes, interfaces, and other members of another package accessible to the current package.
- extends
 - the child class inherits or acquires all the properties of the parent class.
- implements
 - used to implement an interface.
- interface
 - an abstract type that is used to specify a behavior that classes must implement.
- Object related keywords:
 - new
 - a Java operator that creates the object.
 - The new operator is followed by a call to a constructor.
 - instanceof
 - a binary operator used to test if an object (instance) is a subtype of a given Type.
 - It returns either true or false.
 - ~~super~~
 - ~~this~~