

Assignment 1

- What is JDK? JRE? JVM?
 1. JRE: an installation package includes JVM, libraries (integration, other base, Lang and util base), deployment technologies, user interface toolkits.
 2. JDK: a development environment. JRE + development tools
 3. JVM: a runtime environment that java bytecode can execute, run program in other language and compile to java byte code
- What is java compiler?
 1. a program that takes the text file work of a developer and compiles it into a platform-independent Java file
- Why is java platform independent?
 1. The Java programming language and all APIs are compiled into bytecodes, Bytecodes are effectively platform-independent.
 2. it uses a virtual machine which takes care of the differences between the bytecodes for the different platforms
- What is IDE? Why is it important for developers?
 1. an integrated development environment for programming in Java;
 2. provide a code editor, a compiler or interpreter and a debugger that the developer accesses through a unified graphical user interface
- Is java case sensitive?
Yes
- What do the following key words do?
 - static: belongs to the class than an instance of the class
variable
 - refer to the common property of all objects
 - gets memory only once in the class area at the time of class loading
 - method:
 - can be invoked without the need for creating an instance of a class
 - can access static data member and can change the value of it

- Static nested classes do not have access to other members of the enclosing class

block:

- initialize the static data member
- executed before the main method at the time of classloading

final:

variable:

- you cannot change the value of final variable (if it is passed by reference, then reference)
- blank final variable can only be initialized in constructor
- A static final variable that is not initialized at the time of declaration is known as static blank final variable. It can be initialized only in static block.

method:

- cannot override

class:

- cannot extend it, but can be inherited

public:

- an access modifier used for classes, attributes, methods and constructors, making them accessible by any other class.

private:

- an access modifier used for attributes, methods and constructors, making them only accessible within the declared class.

Void

- denotes that a method does not have a return type.

Null

- not a keyword, a reserved word for literal values

package

- specify a directory structure to which the current source file must belong

class:

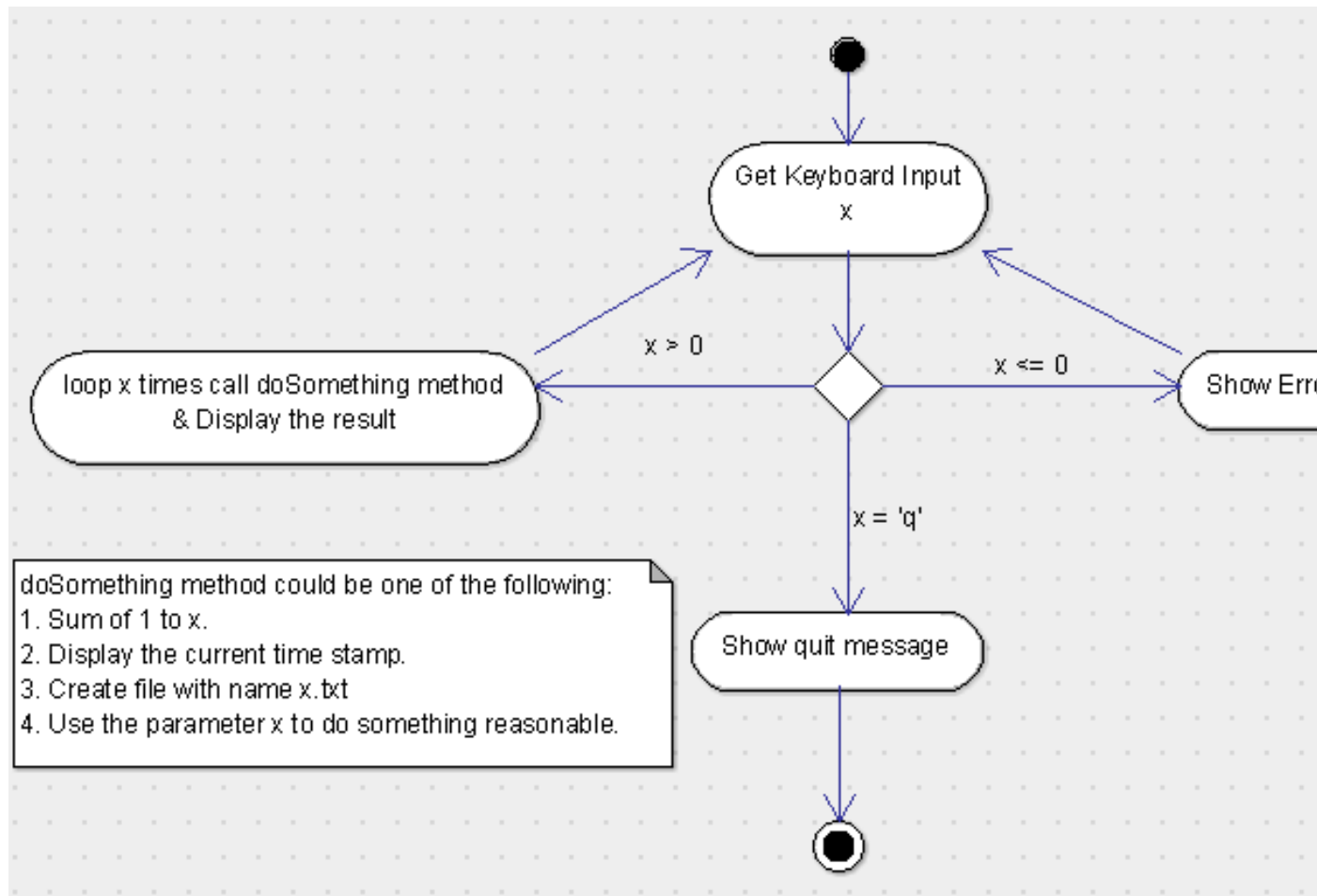
- declare a new Java class, which is a collection of related variables and/or methods

new

- create an instance of the class, it instantiates a class by allocating memory for a new object and returning a reference to that memory

- What is primitive type and reference type?
 - primitive: stored directly on the stack, int, byte, short, long, float, double, boolean and char
 - reference: It contains the address (or reference) of dynamically created objects. a subclass of type `java.lang.Object`.
- Is parameter passed by value or reference?
passed-by-value
- What is the output: `System.out.println(1 > 0 : "A":"B");`
wrong command, ":" after 0 should be "?"
- How to define constants in java?
static / final modifier
- What is String? Is it primitive type?
Objects that are backed internally by a char array.
- How to check if a String is representing a number?
use `parseInt()` / `valueOf` / `parseDouble` / `parseFloat()` / `parseLong()`

- Write a program to implement the following activity diagram:



- Write a program to merge two array of int.
- Write a program to find the second largest number inside an array of int.