**Unit 1 assignment**

Syntax means the rules that govern the structure of a programming language for example the rules that govern how variables are declared, loops are written and function or subroutine calls. If these are not followed, one gets a syntax error, with this the program will not even run, it will break.

Semantics are concerned with the results of the program, does your code actually carry the right meaning and will it produce the results it is intended to produce.

Syntax Error in Java

/\* program to add two numbers \*/

public class AddTwoNumbers {

public static void main(String[] args) {

int a = 2;

int b = 2;

int result = a+b //missing semicolon here is a syntax error

System.out.println(result);

}

}

**Output**

**Exception in thread "main" java.lang.Error: Unresolved compilation problems:**

**Syntax error, insert ":: IdentifierOrNew" to complete ReferenceExpression**

**Syntax error, insert ";" to complete LocalVariableDeclarationStatement**

**at AddTwoNumbers.main(AddTwoNumbers.java:5)**

Semantic error

/\* program to add two numbers \*/

public class AddTwoNumbers {

public static void main(String[] args) {

int a =- 2;

int b = (float) 2.3;

float result = a+b; //missing semicolon here is a syntax error

System.out.println(result);

}

}

**Output**

**Exception in thread "main" java.lang.Error: Unresolved compilation problem:**

**Type mismatch: cannot convert from float to int**

**at AddTwoNumbers.main(AddTwoNumbers.java:5)**