Java
Assignment 2

Note:

1. The answer to the theory question should be submitted in a text file (DOC, DOCX, TXT, or PDF).

2. In implementing your programs, please use only those language features which have been discussed so far in the class.

3. For the programming problems, you are not expected to take inputs from user or input files etc. Simply hard-code input values in the `main` function.

Questions:

1. Discuss the following (with examples):
   - (a) Functions and procedures
   - (b) Side-effects, their pros and cons
   - (c) Modularity and reusability w.r.t. functions
   - (d) Parameter passing styles
   - (e) Function overloading/static polymorphism

   (theory.doc)

2. Write a function `dbl` which takes an integer `n` and returns its double. (`q??.java`)

3. Write a function `speak` that returns the sound of an animal. If animal is `"human"`, the function returns `"bla bla bla"`; if the animal is `"dog"`, the function returns `"bark"`; and if the animal is `"cat"` then the function returns `"meow"`. Use if-else constructs. (`q??.java`)

4. Write a function `iterativeSumFor` that accepts an integer `n` and returns the value of the sum `1 + 2 + 3 + ...  + n`. Use for-loop. (`q??.java`)

5. Write a function `iterativeSumFor` that accepts an integer `n` and returns the value of the sum `1 + 2 + 3 + ...  + n`. Use while-loop. (`q??.java`)