▪ **Include comments at the top of your program**

Program 1

Key in the example programs from lecture 3, compile and run.

Program 2

Write a program that to allow salespeople to input their sales figures for Monday through to Friday. Calculate the average sales for the week and output to the screen.
Save this program on your X drive within the Java/week3 folder as **P2Average.java**

Program 3

Write a program in java to determine if someone is eligible for a pension. Read in a person's age and if they are 65 or over they should be told that they are eligible for a pension. Otherwise **they are not told anything.**
Save this program on your X drive within the Java/week3 folder as **P5Pension.java**

Program 4

Write a program in java to determine if someone is eligible for a pension. Read in a person's age and if they are 65 or over they should be told that they are eligible for a pension. Otherwise they are **told that they are not eligible for a pension.**

Save this program on your X drive within the Java/week3 folder as **P6Pension2.java**

Written Questions

 Q1: Which of the following is not an algorithm?
a.   A recipe.
b.   Operating instructions.
c.   Textbook index.
d.   Shampoo instructions (lather, rinse, repeat).

Q2: Which of the following is true?
a.   Pseudocode is used to describe an algorithm.
b.   Pseudocode is translatable by the programmer into a programming language (like Java).
c.   Pseudocode is used to describe executable statements that will eventually be translated by the programmer into a program.

d. All of the above.

Q3: Which of the following is not a control structure:
a. Sequence structure.
b. Selection structure.
c. Repetition structure.
d. Declaration structure.

Q4: Which of the following is the shape of an action-state symbol?
a. Diamond.
b. Circle.
c. Rectangle with left and right sides replaced with arcs curving outward.
d. Rounded rectangle.

Q5: Which statement is false?
a. Unless directed otherwise, the computer executes Java statements one after the other in the order in which they are written.
b. Activity diagrams normally show the Java code that implements the activity.
c. Like pseudocode, activity diagrams help programmers develop and represent algorithms.
d. The arrows in the activity diagram represent transitions, which indicate the order in which the actions represented by the action states occur.

Q6: Which of the following is a double-selection control statement?
a. do…while.
b. for.
c. if…else.
d. if.

Q7: What is output by the following Java code segment?
```
int temp;
temp = 200;

if ( temp > 90 )
   System.out.println( "This porridge is too hot." );

if ( temp < 70 )
   System.out.println( "This porridge is too cold." );

if ( temp == 80 )
   System.out.println( "This porridge is just right!" );
```
a. This porridge is too hot.
b. This porridge is too cold.
c. This porridge is just right!
d. None of the above.

Q8: A decision symbol in an activity diagram takes the shape of a _____.
a. Diamond.
b. Rectangle.
c. Circle.
d. Triangle.

Q9: Which of the following is *not* included in an activity diagram for a control structure?
a. Transition arrow.
b. Attribute.
c. Action state.
d. Decision symbol.

Q10: Java is considered a strongly typed language because:
a. The primitive types in Java are portable across all computer platforms that support Java.
b. Java requires all variables to have a type before they can be used in a program.
c. Instance variables of the primitive types are automatically assigned a default value.
d. All of the above.

Q11: Which of the following is *not* a primitive type?
a. char
b. float
c. String
d. int

Q12: Which primitive type can hold the largest value?
a. int
b. long
c. float
d. double

Q13: What is the size in bits of an int?
a. 8
b. 16
c. 32
d. 64