Lab 04 – Selection

Enrique Saracho Felix

100406980

CPSC 1150

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# Q1 – Sort three integers

## Program Sort3

**File name:** lab04\Sort3.java

**Purpose:** To sort and display in ascending order three integer values entered by the user.

**Packages:** lab04

java.util.Scanner.

**Limitations:** Double or float values.

**Input:** Integers *a*, *b*, and *c*.

**Output:** *a*, *b*, and *c*. In ascending order.

**Pseudocode:**

Algorithm (program name)

START

1. Declare three integer variables (*a*, *b*, and *c*).
2. Input values for each variable from the user.
3. If *a* < *b* then:
   1. If *a* < *c* then:
      1. Print *a*.
      2. If *b* < *c* then:
         1. Print *b*.
         2. Print *c*.
      3. Else:
         1. Print *c*.
         2. Print *b*.
   2. Else:
      1. Print *c*.
      2. Print *a*.
      3. Print *b*.
4. Else:
   1. If *b* < *c* then:
      1. Print *b*.
      2. If *a* < *c* then:
         1. Print *a*.
         2. Print *c*.
      3. Else:
         1. Print *c*.
         2. Print *a*.
   2. Else:
      1. Print *c*.
      2. Print *b*.
      3. Print *a*.

END (program name)

A diagram of a flowchart

Description automatically generated with medium confidence

# Q2 – Use logical operator

## Program LogicalOps

**File name:** (file’s relative path)

**Purpose:** To determine whether a value entered by the user is divisible by 5 **and** 6, also if it’s divisible by 5 **or** 6, and if it’s divisible by 5 **or** 6 but **not both**.

**Packages:** (list of imported packages)

**Limitations:** (input it can’t handle, list of possible error messages, round-off error)

**Bugs:** (list of unfixed bugs)

**Input:** Integer num.

**Output:** Three strings, each with Boolean values for each condition:

5 and 6 (*cond1*),

5 or 6 (*cond2*),

5 or 6 but not both (*cond3*).

**Pseudocode:**

Algorithm (program name)

START

1. Declare the variables:
   1. Int *num*,
   2. Boolean *cond1*, *cond2*, *cond3*.
2. Initialize Boolean variables to *false*.
3. Prompt user to input *num*.
4. If *num* is divisible by 5 **and** 6, then:
   1. *cond1* is *true*.
5. If *num* is divisible by 5 **or** 6, then:
   1. *cond2* is *true*.
6. If *num* is divisible by 5 **or** 6 but **not both**, then:
   1. *cond3* is *true*.
7. Display text with *cond1*.
8. Display text with *cond2*.
9. Display text with *cond3*.

END (program name)

A picture containing text, diagram, sketch, technical drawing

Description automatically generated