Republic of the Philippines
Department of Education
REGION III
SCHOOLS DIVISION OFFICE OF NUEVA ECIJA

LEARNING ACTIVITY SHEET

SPECIAL PROGRAM IN ICT 9
BASIC PROGRAMMING 9
First Quarter, Week 5

Name of Learner: _____

Grade Level /Section: _____ Date:_____

The Flowchart and Its Symbols

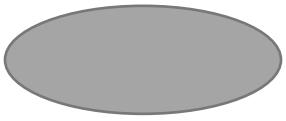
BACKGROUND INFORMATION FOR LEARNERS

Have you experienced following directions with the use of symbols? There are times that we follow specific process through the help of directions and steps converted into a graphical representation. For example, when we are inside a shopping center looking for a comfort room, all we have to do is to find the symbol of a man and a woman with an arrow that says “Comfort Room”.

Graphical representation of steps is simply what we call a **flowchart.** Flowchart shows steps in sequential order with the use of symbols such as arrow, box, diamond, etc. It is widely used in presenting the workflow or processes of such companies. Typically, a flowchart shows the steps using shapes of various kinds, and their orders are connected using arrows.

FLOWCHART SYMBOLS

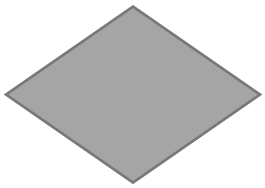
1. Terminal – It indicates start and end of the program or system. This is the first and last symbol in the flowchart and is represented by an oval.



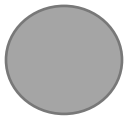
2. Input/Output – represented by a parallelogram. It denotes any function of input or output. Program instructions that requires entering a data such as age, gender, birthday and display this information using an output devices is being represented by input/output symbol. For example, entering the letters and numbers from your username and password should be represented by a parallelogram.

3. Processing – represented by a rectangle. Any step that requires processing of information should be represented by a rectangle. For example, when you enter your username and password, it will go through a process of validation in which the system will check the validity of your data. This process should be represented by a rectangle.

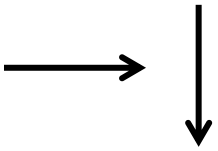
4. Decision – Decision based operations such as yes/no or true/false statements should be represented by a diamond. Example: Is your email correct? Is your grade greater than or equal to 75?



5. Connector – represented by a circle. Whenever flowchart becomes complex or it spreads over more than one page, it is useful to use connectors to avoid any confusions.



6. Flow lines - indicates the exact sequence in which instructions are executed. Arrows represent the direction of flow of control and relationship among different symbols of flowchart.

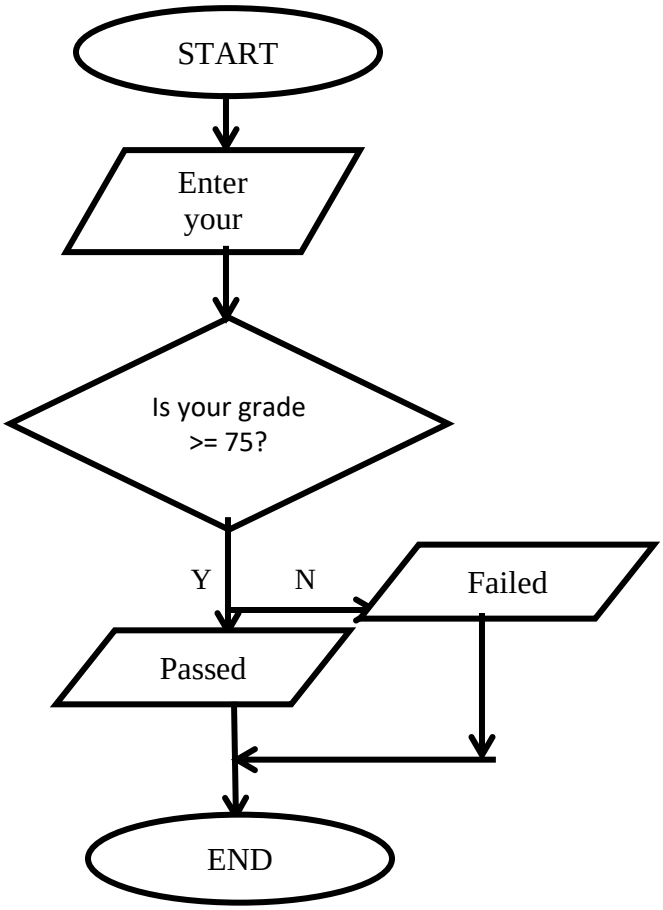


Example 1

Algorithm in checking if your grade is passed or failed.

1. Enter your age.
2. Is your grade greater than or equal to 75?
3. If yes, print the word “Passed”.
4. If no, print the word “Failed”.

Below is a sample flowchart based on the algorithm above.

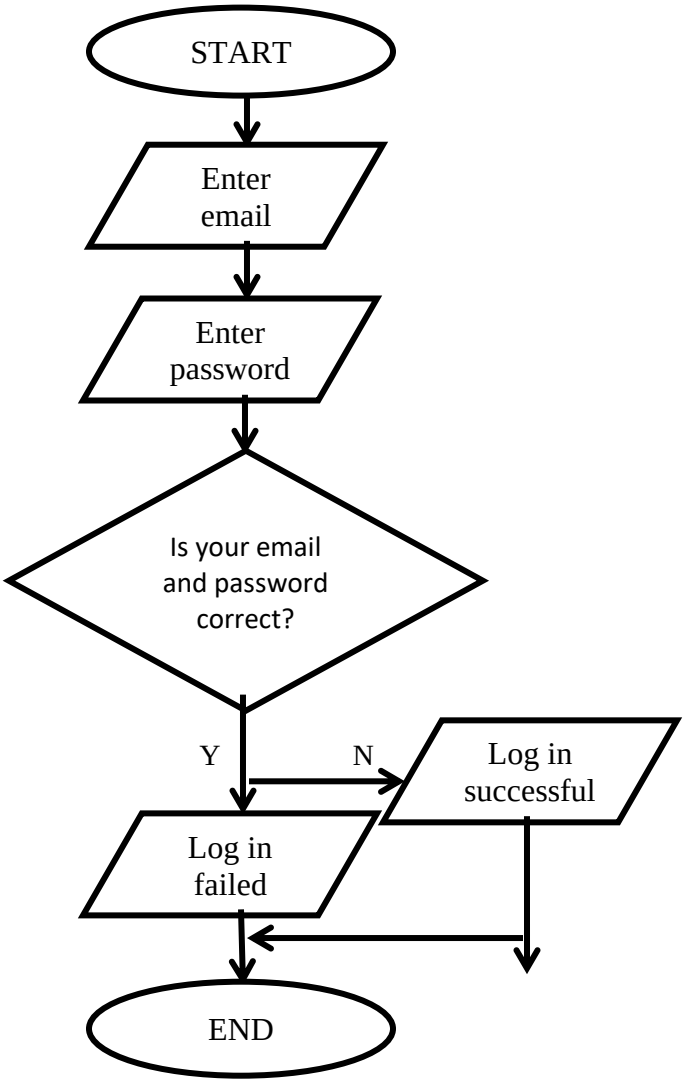


Example 2

Algorithm in logging in to Facebook:

1. Enter your email or phone number.
2. Enter your password.
3. Is your email and password correct?
4. If yes, print log in successful.
5. If no, print log in failed.

Below is a sample flowchart based on the algorithm above.



LEARNING COMPETENCY

Define flowchart and identify flowchart symbols.

ACTIVITIES

ACTIVITY 1

Directions: Identify the flowchart symbol to use based on the given steps below. Write your answer on the space provided before each number.

_____ 1. Enter your PIN.

_____ 2. Print the student's name.

_____ 3. Compute the sum of 2 numbers.

_____ 4. Is your grade >= to 75?

_____ 5. End of the program.

_____6. Input your age.

_____7. Compute the average.

_____8. Display the result.

_____9. Are you qualified?

_____10. Start the program.

ACTIVITY 2

Directions: Create a flowchart based on the algorithm below. Use a separate sheet of paper for your output. 2 points each steps.

Withdraw money from an ATM.

1. Insert your card in the machine
2. Select Withdraw Money.
3. Enter the amount to withdraw.
4. Enter your PIN
5. Is your PIN correct?
6. If Yes, dispense cash.
7. If No, transaction failed.

ACTIVITY 3

Directions: Create a flowchart based on the algorithm below. Use a separate sheet of paper for your output. 2 points each steps.

1. Enter the first number.
2. Enter second number.
3. Compute the sum.
4. Display the result.

REFLECTION

How can you describe the essence of applying the use of flowchart in our daily lives?

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