**1. What is Boolean? Write down 3 different expression that results a Boolean type (i.e. 5 == 6)**

-> **Answer:**

- Boolean is named after the British mathematician, Geogre Boole, who first formulated Boolean algebra - some rules for reasoning about and combining these values. This is the basis of all modern computer logic.

+ A Boolean value is either True or False. (the capitalization must be exactly as shown in Python)

+ A Boolean expression is an expression that evaluates to produce a result which is a Boolean value

- Example of expression that results a Boolean type:

+ 1994 > 1999 -> False

+ 23 == (10 + 13) -> True

+ middle\_name = "Thanh "

middle\_name + "Long" == "Thanh Long" -> True

**2. What is a flow chart? Draw flow chart for the following code snippet: (you can draw on a paper, take a picture of it)**

if name == “Huy be":

print(“Hand some")

elif name == “Huy big":

even\_more\_handsome = True

else:

webbrowser.open(“https://www.youtube.com/watch?v=04854XqcfCY”)

-> **Answer:**

- A flowchart is a type of diagram that represents an algorithm, workflow or process, showing the steps as boxes of various kinds, and their order by connecting them with arrows. This diagrammatic representation illustrates a solution model to a given problem. Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

- Draw flowchart:

Input name

name == “Huy be”

**True**

**False**

print(“Hand some”)

even\_more\_handsome = True

name == “Huy big”

**True**

webbrowser.open(“https://www.youtube.com/watch?v=04854XqcfCY”)

**False**

**3. What is nested conditionals? Write a piece of code that uses nested conditionals**

**-> Answer:**

**-** Nested conditionals is: One conditional has another conditional is nested within its own or one conditional can be nested within another which is called nested conditional.

- Example:

username = input("Username: ")

if username.lower() == "c4e":

password = input("Password: ")

if password == "codethechange":

print("Welcome, c4e")

else:

print("Password is incorrect")

else:

print("You are not superuser")