

ME1 Computing- Tutorial 1: Variables and Statements

Learning outcomes:

- Being familiar with the concept of variables and their basic types
- Being familiar with the concept of assignment
- Being able to perform basic variable operations

Please provide feedback at: www.menti.com with code 44 88 7

Before you start

In your H drive create a folder `H:\ME1CPT\Tutorial1` and work within it.

Task A: Perform a list of instructions

1. Perform in Python the following set of instruction:

a = 2
b = 4
c = a + b
a = a + 1
b = a
c = a + b

After any instruction, print and observe the value of each variable.

2. Calculate the value of $z = 3x + y^2$ for $x = 11$ and $y = -3$.

Answer Question 1

Task B: Assignments and basic variable operations

1. Create a variable *var* and assign the value 3.14 to it. Copy the value of *var* into another variable *varcopy*. Double the value of *var*.
2. Create a variable *MyPints* and assign the value 3 to it. Create another variable *drink2more* with value 2. Increment the value of *MyPints* by the value of *drink2more*. Increment it again (you are getting drunk!).
3. Create a variable *Num* with value 3 and a variable *Den* with value 4. Divide the value of *Num* by the value of *Den* and assign the result to the variable *Res*.

Answer Question 2

Task C: Swapping

1. Create two variables a and b with values 10 and 5 respectively. Swap their values.
2. Create a third variable c with value = 20. Swap a with c and then c with b .

Answer Question 3**Task D: Type conversion**

1. Assign the value 2 as a string to variable a and the value 2 as a number to variable b .
2. Add a and b into variable f .
3. Assign the value 3 as a string to variable c and the value 3 as a number to variable d .
4. Add a and c into variable g . Add b and d into variable h .
5. Convert a and c into numbers and add again a and c into variable m .

Answer Question 4**Answer Question 5**