****

**Student Name:** Joseph MUTANGANA

**Student ID:** 29061

**Group:** 4

**Course Name:** Introduction to Computer Programming

**Question 1 Variables:**

**1.**

A = 3

B = 4

**2.**

A = 2

B = 3

C = 1

**3.**

A = 6

B = 2

**4.**

A = 13

B =13

C =13

**5.**

A = 2

B = 2

**6.**

Start

Declare A, B, Exchanger AS STRING

Input A, B

Print “Before exchange: ”, A, “ “, B

Exchanger = A

A = B

B = Exchanger

Print “After Exchange: ”, A “ “, B

Stop

**7.**

Start

Declare A, B, C as CHARACTER

Input A, B, C

B=A

C=B

A = C

Print A, B, C

Stop

**8.** C = “42312”

**9.** C = “42312”

**Question 2 Read & Write:**

**7.**

Start

Declare Celsius, F as FLOAT

Input temperature in Celsius (C).

Apply the formula:

F = (C\*9/5) + 32

where F is Fahrenheit

Print "Temperature in Fahrenheit Is: ", F

Stop

**8.**

Start

Declare Fahrenheit, C as FLOAT

Input temperature in Fahrenheit

Apply the formula:

C = (Fahrenheit – 32) \* 5/9

where C is Celsius

Print "Temperature in Celsius Is: ", C

Stop

**Question 3 Conditional structures:**

**7.**

Start

Input step:

The program asks the user to input a single character.

**Condition 1:**

If the input is between "a" and "z" (inclusive),

It means the character is a lowercase letter,

So it prints: “Alphabet is Lowercase”.

**Condition 2:**

If not lowercase, it checks if the input is between "A" and "Z" (inclusive),

If true, then the character is an uppercase letter,

Prints: “Alphabet is Uppercase”.

Else case:

If the input is neither lowercase nor uppercase,

It prints: “Alphabet is neither uppercase nor lowercase”.

Stop

**8.**

Start

Declare character Check

Display "Enter a character: "

Read Check

If Check is an alphabet (a-z or A-Z) then

If Check is 'a' or 'e' or 'i' or 'o' or 'u' or

Check is 'A' or 'E' or 'I' or 'O' or 'U' then

Display "The character is a vowel."

Else

Display "The character is a consonant."

Endif

Else

Display "Invalid input. Not an alphabet."

Endif

End

**14**.

Start

Declare Total\_Marks, Percentage, marks1, marks2, marks3, marks4, marks5 as FLOAT

Let’s say the marks is on /100, so the program will ask for that marks

Here we are going to use example of five different marks

Print “Enter the marks”

Input marks1, marks2, marks3, marks4, marks5

Total\_Marks = marks1+marks2+ marks3+ marks4 +marks5

Percentage = (Total\_Marks/500) \* 100

If Percentage >= 80

Print “Division A”

Else If Percentage >= 60

Print “Division B”

Else if Percentage >= 50

Print “Division C”

Else

Print “Division F”

End if

Stop