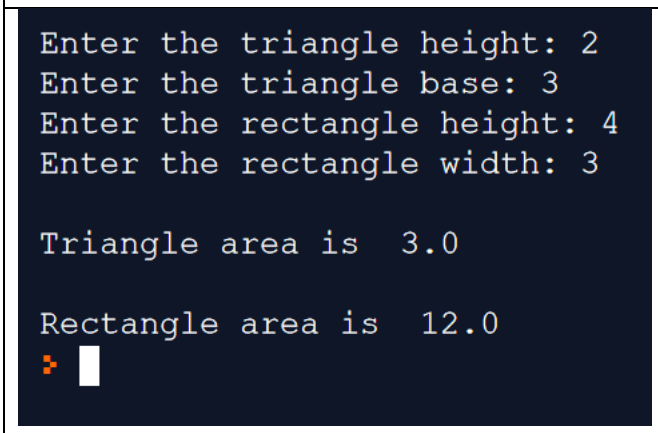
Variables Exercises

Exercise 1:
Calculate area of shapes for triangle and rectangle
`Triangle area = (Height * Triangle)/2`
`Rectangle area = Rectangle Height * Rectangle width`

Screen



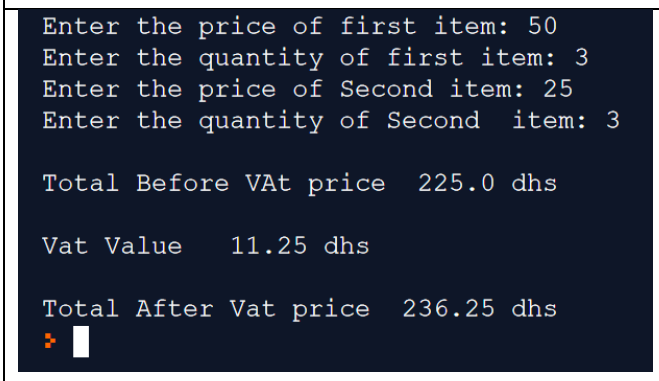
Code

```
Triangle_Height = input ("Enter the
triangle height: ")
Triangle_Height = float(Triangle_Height)

Triangle_Base = input ("Enter the
triangle base: ")
Triangle_Base = float(Triangle_Base)

Rectangle_Height = input ("Enter the
rectangle height: ")
Rectangle_Height =
float(Rectangle_Height)

Rectangle_width = input ("Enter the
rectangle width: ")
Rectangle_width = float(Rectangle_width)

Triangle_area = (Triangle_Height *
Triangle_Base)/2
Rectangle_area = Rectangle_Height *
Rectangle_width

print ("\nTriangle area is
",Triangle_area )
print ("\nRectangle area is
",Rectangle_area )
```

Exercise 2:

Write python program to read two items prices and quantities, then calculate the vat value, total cost and display the total without vat, the vat value, and the total with the vat value.

Screen



Code

```
price1 = input("Enter the price of first item: ")
price1= float(price1)

item1 = input ("Enter the quantity of first item: ")
item1 = int(item1)

price2 = input("Enter the price of Second item: ")
price2= float(price2)

item2 = input ("Enter the quantity of Second item: ")
item2 = int(item2)

Total = (item1 * price1 ) + (item2 * price2)
Vat = Total * 0.05
Final_Price = Total + Vat

print ()

print ("Total Before VAt price ", Total , "dhs")
print ("\nVat Value  ", Vat  , "dhs")
print ("\nTotal After Vat price ", Final_Price , "dhs")
```

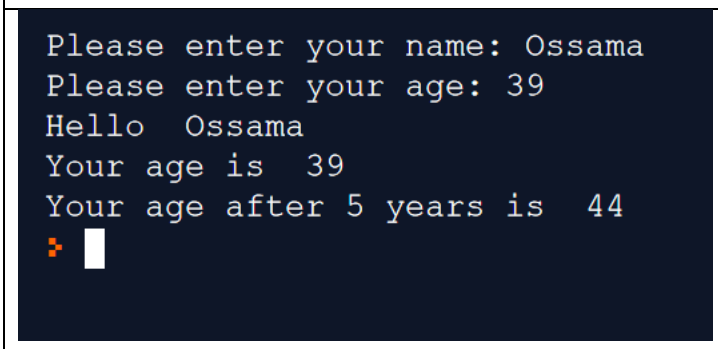
Exercise 3:

Write python program to read the user name, the number of pizza the user want, the vat value. Calculate the vat and the total cost including the vat value. Consider the pizza has a fixed prices of 25 AED.

Screen	Code
Please enter your name: Omar Hello Omar How many pizzas you want?: 4 Enter tax rate: 5 Pizza Number: 4 Price for each: 25 Price before tax: 100 Tax: 5.0 Price After tax: 105.0	name = input ("Please enter your name: ") print ("Hello", name) Order= input("How many pizzas you want?: ") Order =int(Order) rate= input("Enter tax rate: ") rate =float(rate)/100 Price=25 TotalBeforeTax = Order * Price Tax = TotalBeforeTax * rate Total_Including_Tax =TotalBeforeTax + Tax print ("Pizza Number: ", Order) print ("Price for each: ", Price) print ("Price before tax: ", TotalBeforeTax) print ("Tax: ", Tax) print ("Price After tax: ", Total_Including_Tax)

Exercise 4:

Write python program to read the user name, age , then display Hello message followed by the user name, and display the age after 5 years.

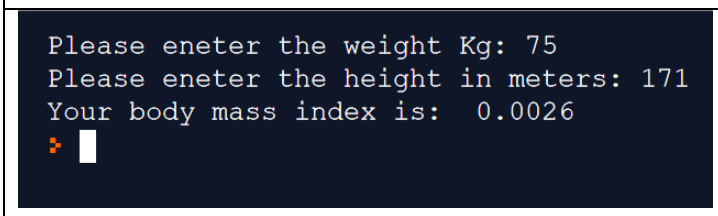
Screen	Code
	


```
name = input ("Please enter your name: ")
age = input ("Please enter your age: ")
age=int(age)

print ("Hello ", name)
print ("Your age is ", age)
Age_in_fiveYears= age+5
print ("Your age after 5 years is ", Age_in_fiveYears)
```

Exercise 5:

Write a python program that read weight (kg) and height (m) of a person, calculate and display his BMI [Body mass index].

$BMI = \frac{kg}{m^2}$

Screen	Code
	


```
KG = input ("Please enter the weight Kg: ")
KG = float(KG)

Meter = input ("Please enter the height in meters: ")
Meter = float(Meter)

BMI =round( (KG)/(Meter**2), 4)

print ("Your body mass index is: ", BMI)
```

Exercise-6:
A basket can hold 5 apples. Write a python program that read total number of apples, calculate and display the number baskets need and number of apples that will be without a basket.

(Note: you need to use integer division and modulus operators)

Screen	Code
Enter the total number of apples: 17 Total baskets needed is: 3 Apples remaining without basket: 2	Apples = input("Enter the total number of apples: ") Apples = int(Apples) Baskets = Apples // 5 Remaining = Apples % 5 print ("Total baskets needed is: ", Baskets) print ("Apples remaining without basket: ", Remaining)