## Week 2 Liyuan Liu

### 1 Define suitable variables: a) 999999 b) 5.55555555555 c) 'x' d) "Kokkola" e) 2.33 f) 10 g) 300 h) 9 billions i) 3 billions

Answer:

a)<class 'int'>

b)<class 'float'>

c)<class 'str'>

d)<class 'str'>

e)<class 'float'>

f)<class 'int'>

g)<class 'int'>

h) invalid syntax

I) invalid syntax

### 2 Our programs uses Ohm's law to calculate the resistance. User gives voltage and current.

Answer:

#This program takes voltage and current value from user, and find fitable resistor.

u\_voltage = float( input("Enter your voltage:"))

u\_current = float( input("Enter your current:"))

print("Resistor: ")

### 3 User gives the speed of the car (km/h) and the distance (km). Program calculates amount of time. a) in hours b) in whole hours and minutes

Answer:

#This program calculates the time in different form for user giveb distance and #speed.

u\_speed = float(input("Enter your speed of the car (km/h):"))

u\_distance = float(input("Enter your destine distance (km):"))

time = u\_distance/u\_speed

print('Your traveling time is: ', end="")

print(time, end="")

print(' hours, which is ', end="")

print(int(time), end="")

print(' hours and ', end="")

print(int(((time-int(time))\*60)), end="")

print('minutes')

### 4 Our program calculates BMI.

Answer:

height = float(input("Enter your height (cm): "))

weight = float(input("Enter your weight (kg): "))

BMI = weight/pow((height/100),2)

print(f"You BMI is {BMI}")

if BMI <= 18.4:

print("You are underweight.")

elif BMI <= 24.9:

print("You are healthy.")

elif BMI <= 29.9:

print("You are over weight.")

else:

print("You are severely over weight.")

### 5Create a euro converter: dollars to euros.

Answer:

1)sudo apt install python3-pip

2)pip install forex-python

3)python code:

from forex\_python.converter import CurrencyRates

c=CurrencyRates()

exc=c.get\_rate('USD','EUR')

d=float(input("Enter your dollars amount: "))

e=d\*exc

print(round(e,2))

### 6 Convert seconds to hours, minutes, seconds.

Answer:

s=int(input("Enter your seconds: "))

h=s//3600 #floor divide

s = s % 3600 #deduct hours, left seconds

m= s//60

s = s % 60

print(f"{h} hours {m} minutes {s} seconds")

### 7 Convert euros to 5, 10, 20, 50, 100, 200, 500 euros bills.

Answer:

e=float(input("Enter your euros amount: "))

e\_500 = e // 500

e = e - e\_500\*500

e\_200 = e // 200

e = e - e\_200\*200

e\_100 = e // 100

e = e - e\_100\*100

e\_50 = e // 50

e = e - e\_50\*50

e\_20 = e // 20

e = e - e\_20\*20

e\_10 = e // 10

e = e - e\_10\*10

e\_5 = e // 5

e = e - e\_5\*5

print(f"You have 500e bill: {round(e\_500)}, 200e bill: {round(e\_200)}, 100e bill: {round(e\_100)}, 50e bill: {round(e\_50)}, 20e bill: {round(e\_20)}, 10e bill: {round(e\_10)}, 5e bill: {round(e\_5)}.")