Week 2 Coding Challenge

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Exercise 1.1: What is the function of the secondary memory in a computer?

Answer: C, Store information for the long term, even beyond a power cycle.

Exercise 1.6: Where in the computer is a variable such as 'x' stored after the following Python line finishes?

Answer: B, Main Memory

Exercise 1.7: What will the following program print out:

Answer: B, 42

Exercise 2.2

```
name = input("What is your name?")
print("Welcome " + name)
```

```
Welcome Chuck
```

Exercise 2.3

```
hours = 35
rate = 2.75
pay = hours * rate
round (pay, 2)
print(pay)
```

```
96.25
```

**Exercise 2.4

```
width = 17
height = 12.0
```

1. Answer: integer

```
print(width/2)
type(width/2)
```

```
8.5
```

```
float
```

2. Answer: float

```
print(width/2.0)
type(width/2.0)
```

```
8.5
```

```
float
```

3. Answer: float

```
print(height/3)
type(height/3)
```

```
4.0
```

```
float
```

4. Answer: integer

```
print(1 + 2 * 5)
type(1 + 2 * 5)
```

```
11
```

```
int
```

Exercise 2.5

```
tempC = int(input("What is the temperature in Celsius?"))
tempF = (tempC * 9/5 + 32)
tempF = str(tempF)
print("The temperature is " + tempF + " degrees Fahrenheit.")
```

```
The temperature is 32.0 degrees Fahrenheit.
```

Exercise 3.1

```
# hours = 45
# rate = 10

try:
    hours = float(input("How many hours did you work this week?"))
    rate = float(input("What is your pay rate?"))
    if hours > 40:
        pay = (40 * rate) + ((hours - 40) * (rate * 1.5))
    elif hours <= 40:
        pay = hours * rate
    print(f"You earned {pay} dollars this week.")
except:
    print("Error, please enter numeric input.")
```

```
You earned 475.0 dollars this week.
```

Exercise 3.2

```
hours = input("How many hours did you work this week?")
rate = input("What is your pay rate?")

try:
    if hours > 40:
        pay = (40 * rate) + ((hours - 40) * (rate * 1.5))
    elif hours <= 40:
        pay = 40 * rate
except TypeError:
    print("Error, please enter numeric input.")
```

```
Error, please enter numeric input.
```

Exercise 3.3

```
try:
    score = float(input("Enter the score between 0.0 and 1.0."))
    if score >= 0.9 and score <= 1.0:
        print("A")
    elif score >= 0.8 and score < 0.9:
        print("B")
    elif score >= 0.7 and score < 0.8:
        print("C")
    elif score >= 0.6 and score < 0.7:
        print("D")
    elif score < 0.6 and score >= 0.0:
        print("F")
    else:
        print("Bad Score")
except ValueError:
    print("Bad Score")
```

```
Bad Score
```

Exercise 4.1

```
for i in range(10):
    x = random.random()
    print(x)
```

```
0.5572100162503856
0.029833146499546936
0.6045753806909951
0.017373055206432064
0.7640800366538951
0.43962649939038745
0.9841613697457416
0.7426619843610329
0.26598135384428967
0.2831647534876708
```

Exercise 4.2

```
repeat_lyrics()
def print_lyrics():
    print("I'm a lumberjack, and I'm okay.")
    print("I sleep all night and I work all day.")
def repeat_lyrics():
    print_lyrics()
    print_lyrics()
```

```
I'm a lumberjack, and I'm okay.
I sleep all night and I work all day.
I'm a lumberjack, and I'm okay.
I sleep all night and I work all day.
```

Exercise 4.3

```
def repeat_lyrics():
    print_lyrics()
    print_lyrics()
def print_lyrics():
    print("I'm a lumberjack, and I'm okay.")
    print("I sleep all night and I work all day.")
repeat_lyrics()
```

```
I'm a lumberjack, and I'm okay.
I sleep all night and I work all day.
I'm a lumberjack, and I'm okay.
I sleep all night and I work all day.
```

Exercise 4.4 Answer: D

Exercise 4.5 Answer: D

Exercise 4.6

```
# Hours = 45
# Rate = 10

hours = float(input("How many hours did you work this week?"))
rate = float(input("What is your pay rate?"))
```

```
def computepay(hours, rate):
    if hours > 40:
        pay = (40 * rate) + ((hours - 40) * (rate * 1.5))
    elif hours <= 40:
        pay = 40 * rate
    return pay

print(computepay(hours, rate))
```

```
475.0
```

Exercise 4.7

```
score = input("What is your score?")

def computegrade(score):
    try:
        score = float(score)
        if(score >= 0.0 and score <= 1.0):
            if(score >= 0.9 and score <= 1.0):
                print("A")
            elif(score >= 0.8 and score < 0.9):
                print("B")
            elif(score >= 0.7 and score < 0.8):
                print("C")
            elif(score >= 0.6 and score < 0.7):
                print("D")
            elif(score < 0.6 and score >= 0.0):
                print("F")
        else:
            print("Bad Score")
    except ValueError:
        print("Bad Score")
    return score

final_score = computegrade(score)
```

```
F
```