Python / Pseudocode Challenges – Answers
If there are any mistakes, queries or any of which you want me to go over let me know using the request a topic button on the website.
<mark>Easy Difficulty</mark>

1.
```python
name = input("Enter your name: ")
age = int(input("Enter your age: "))
colour = input("Enter your favourite colour: ")
print(name)
print(age)
print(colour)
```

2.
```python
name = input("Enter your name: ")
surname = input("Enter your surname: ")
print(name + " " + surname)
```

3.
```python
num1 = int(input("Enter number 1: "))
num2 = int(input("Enter number 2: "))
print(num1 + num2)
print(num1 * num2)
```

4.
```python
def speedcalculator(dist, time):
    return dist/time
distance = int(input("Enter a distance: "))
time = int(input("Enter the time: "))
print(speedcalculator(distance, time))
```

   OR

```python
distance = int(input("Enter a distance: "))
time = int(input("Enter the time: "))
print(distance / time)
```

5.
```python
number = int(input("Enter the number of letters in the alphabet: "))
if number == 26:
  print("correct")
else:
  print("incorrect")
```

6.
```python
import random

secret_number = random.randint(1, 10)
user_guess = int(input("Guess the number between 1 and 10: "))
if user_guess == secret_number:
    print('Correct')
else:
    print('Not what I was thinking')
```

7.
```python
lightcolour = input("Enter the traffic light colour (green, amber, red): ")
if lightcolour == 'green':
    print('Go.')
elif lightcolour == 'amber':
    print('Get Ready.')
else:
    print('Stop.')
```

8.
```python
avgtime = int(input("How long on average do you spend watching TV each day (in hours)? "))
if avgtime < 2:
    print("That should be ok")
elif avgtime <= 2 or avgtime <= 4:
    print("That will rot your brain")
else:
    print("That is too much TV")
```

9.
```python
for i in range(1, 21, 2):
    print(i)
```

   OR

```python
for i in range(1, 21):
    if i % 2 != 0:
        print(i)
```

10.
```python
guess = 0

while guess != 7:
    guess = int(input("Guess a number: "))
    if guess == 7:
        print("Well Done")
    else:
        print("Try again!")
```

11.
```python
age = int(input("Please enter the age of the member: "))
discount = 0

if 13 <= age <= 15:
    discount = 0.3
elif 16 <= age <= 17:
    discount = 0.2
elif age >= 50:
    discount = 0.4

if discount > 0:
    print("The member receives a " + str(discount * 100) + "% discount.")
else:
    print("The member receives no discount.")
```

12.
```python
marks = int(input("Please enter the number of marks you got on the test: "))
grade = 'U'

if marks >= 10:
    grade = 1
if marks >= 20:
    grade = 2
if marks >= 30:
    grade = 3
#etc

print("Your grade is: " + str(grade))
```

13.
```python
array = [1,2,4,5,10]
total = 0
for i in range(len(array)):
     total += array[i]
print(total)
```

14.
```python
numbers = [15, 30, 3, 1, 40]
numbertofound = int(input("Please type a number: "))
for i in range(len(numbers)):
    if numbertofound== numbers[i]:
        print(i)
```

15.
```
present_count = 0
absent_count = 0

studentnames = ["John", "Alice", "Bob", "Emma", "David"]

for i in range(len(studentnames)):
    print("Student:", studentnames[i])
    attendance = input("Is the student present? (yes/no): ")

    if attendance == "yes":
        present_count += 1
    elif attendance == "no":
        absent_count += 1

print("Total present students:", present_count)
print("Total absent students:", absent_count)
```

16.
```
procedure SavePlayers(filename, data)
    file = open(filename)
    file.writeLine(data)
    file.close()
endprocedure
```

17.
```
function getText(filename)
    file = open(filename)
    data = file.readLine()
    file.close
    return data
endfunction
```

18.
```
scores = [
    [1, 10, 2],
    [3, 9, 1],
    [0, 2, 5]
]

total = 0
for i in range(len(scores)):
    for j in range(len(scores[i])):
        total += int(scores[i][j])
print(total)
```

19. cars = [

```
    ["BMW", "M1", "20"],
    ["BMW", "320D", "200"],
    ["BMW", "520D", "300"],
    ["Mercedes", "A170", "600"]
]

carmake = (input("Enter a number Make: "))
total = 0
for i in range(len(cars)):
    if cars[i][0] == carmake:
        total += int(cars[i][2])
print(str(carmake) + " sold a total of " + str(total) + " cars!")
```