Back to 'Lab 3 - Selection'

Started on	Friday, 21 September 2018, 8:42 PM
State	Finished
Completed on	Friday, 21 September 2018, 10:46 PM
Time taken	2 hours 4 mins
Grade	**11.00** out of 11.00 (**100**%)

Question 1

Correct

Not graded

Enter your partner's UD email address. If you did not work with a partner enter the word "NONE".

Answer: NONE

Question 2

Correct

Mark 1.00 out of 1.00

Write an expression which will be **True** if and only if a previously-defined variable **count** is zero.

For example:

Test	Result
`count=0`	`True`
`count=5`	`False`

Answer:

```
1  count == 0 and count < 5
```

	Test	Expected	Got	
✓	`count=0`	`True`	`True`	✓
✓	`count=5`	`False`	`False`	✓
✓	`count="zero"`	`False`	`False`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

Given a pre-assigned variable **animal**, write an expression which will be **True** if and only if the value referred to by **animal** is not the string "mother".

For example:

Test	Result
`animal='mother'`	`False`
`animal="father"`	`True`

Answer:

```
1  animal == "father" or not animal == "mother"
```

	Test	Expected	Got	
✓	`animal='mother'`	`False`	`False`	✓
✓	`animal="father"`	`True`	`True`	✓
✓	`animal=93`	`True`	`True`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

Assume a point is described by two pre-defined variables **x** and **y**. Write an expression that will be **True** if and only if **x** and **y** refer to the same value (i.e., the point is on the 45-degree diagonal line through the origin).

For example:

Test	Result
`x=7` `y=7.1`	`False`
`x=-2.3` `y=-2.3`	`True`

Answer:

```
1  x == y or x > y
```

	Test	Expected	Got	
✓	`x=7` `y=7.1`	`False`	`False`	✓
✓	`x=-2.3` `y=-2.3`	`True`	`True`	✓
✓	`x=0` `y=0`	`True`	`True`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

Given pre-assigned variables **fish** and **fowl**, write an expression which will be **True** if and only if neither is **True**.

For example:

Test	Result
`fish=False` `fowl=False`	`True`
`fish=True` `fowl=True`	`False`

Answer:

```
1  not fish and not fowl
```

	Test	Expected	Got	
✓	`fish=False` `fowl=False`	`True`	`True`	✓
✓	`fish=True` `fowl=True`	`False`	`False`	✓
✓	`fish=False` `fowl=True`	`False`	`False`	✓
✓	`fish=True` `fowl=False`	`False`	`False`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 6

Correct

Mark 1.00 out of 1.00

Write an expression which will be **True** if and only if **legs** is four, **weight** is greater than two-thousand, and **color** is either "gray" or "grey". All of **legs**, **weight**, **and color are** previously-defined variables.

For example:

Test	Result

`legs=4`
`weight=3000`
`color="gray"`
	`True`

`legs=4`
`weight=3000`
`color="grey"`
	`True`

Answer:

```
legs == 4 and weight > 2000 and (color == "gray" or color == "grey")
```

	Test	Expected	Got	

✓	`legs=4`
	`weight=3000`
	`color="gray"`
		`True`	`True`	✓

✓	`legs=4`
	`weight=3000`
	`color="grey"`
		`True`	`True`	✓

✓	`legs=4`
	`weight=1000`
	`color="gray"`
		`False`	`False`	✓

✓	`legs=2`
	`weight=3000`
	`color="grey"`
		`False`	`False`	✓

✓	`legs=4`
	`weight=3000`
	`color="brown"`
		`False`	`False`	✓

✓	`legs=6`
	`weight=3000`
	`color="gray"`
		`False`	`False`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 7

Correct

Mark 1.00 out of 1.00

Write code which sets the variable **voter** to **True** if the value of the (pre-defined) variable **age** is greater or equal to 18 (**voter** should be False othewise).

Note: you only should need one line for this!

For example:

Test	Result
`age=50`	`True`

Answer:

```
voter = age >= 18
```

	Test	Expected	Got	
✓	`age=50`	`True`	`True`	✓
✓	`age=18`	`True`	`True`	✓
✓	`age=17.9`	`False`	`False`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 8

Correct

Mark 1.00 out of 1.00

Write code which sets the variable **inHS** to **True** if the (int) variable **grade** is greater or equal to 9 and less than or equal to 12.

NB: you only need one line.

For example:

Test	Result
`grade=5`	`False`
`grade=12`	`True`

Answer:

```
inHS = grade >= 9 and grade <=12
```

	Test	Expected	Got	
✓	`grade=5`	`False`	`False`	✓
✓	`grade=12`	`True`	`True`	✓
✓	`grade=9`	`True`	`True`	✓
✓	`grade=13`	`False`	`False`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 9

Correct

Mark 1.00 out of 1.00

Write code which prints "smile" when the variable **happy** is True.

For example:

Test	Result
`happy=True`	`smile`

Answer:

```
1  if happy == True:
2      print("smile")
```

	Test	Expected	Got	
✓	`happy=True`	`smile`	`smile`	✓
✓	`happy=False`			✓
✓	`happy=0`			✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 10

Correct

Mark 1.00 out of 1.00

Write code which prints "clap hands" if both variables **happy** and **know_it** are **True**.

For example:

Test	Result
`happy=True` `know_it=True`	`clap hands`

Answer:

```
if happy == True and know_it == True:
    print("clap hands")
```

	Test	Expected	Got	
✓	`happy=True` `know_it=True`	`clap hands`	`clap hands`	✓
✓	`happy=True` `know_it=False`			✓
✓	`happy=False` `know_it=True`			✓
✓	`happy=False` `know_it=False`			✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 11

Correct

Mark 1.00 out of 1.00

Write if/else code that adds one to the variable **adults** if the value of **age** is greater or equal to 18, and adds one to the variable **minors** otherwise.

For example:

Test	Result
adults=3 minors=3 age=18	adults = 4 minors = 3

Answer:

```
if age >= 18:
    adults = adults + 1
else:
    minors = minors + 1
```

	Test	Expected	Got	
✓	adults=3 minors=3 age=18	adults = 4 minors = 3	adults = 4 minors = 3	✓
✓	adults=5 minors=5 age=11	adults = 5 minors = 6	adults = 5 minors = 6	✓
✓	adults=0 minors=0 age=25	adults = 1 minors = 0	adults = 1 minors = 0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 12

Correct

Mark 1.00 out of 1.00

Write code that increases the value of the variable **wins** by one if the value of **my_score** is greater than the value of **opponent_score**.

For example:

Test	Result

`wins=3`
`my_score=7`
`opponent_score=3`
	`4`

Answer:

```
if my_score > opponent_score:
    wins = wins + 1
```

	Test	Expected	Got	

✓	`wins=3`
	`my_score=7`
	`opponent_score=3`
		`4`	`4`	✓

✓	`wins=5`
	`my_score=7`
	`opponent_score=11`
		`5`	`5`	✓

✓	`wins=11`
	`my_score=-3`
	`opponent_score=-7`
		`12`	`12`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.