

Python 7 Worksheet: Selection in a Loop

Student Resource



Python Worksheet 7 - Selection in a loop.docx



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Activity 1: Selection in a `while` loop in Python Den

Do level 14 and then levels 15 – 18, when directed by your teacher.

Activity 2: Exploring `if..else` in a `while` loop

Do level levels 19 – 21

Activity 3: Exploring `if..elif..else` in a `while` loop

Do levels 22 – 25, when directed by your teacher

Activity 4: Exploring selection in a `while` loop

Use this as a model to do the following exercises:

```
count = 0
while count < 10:
    country = input("Enter the name of a country ")
    if country == "France":
        print("Bonjour!")
    count = count + 1
```

1. Write a program that asks the user to enter ten items to add to their shopping list. If they enter *Pizza*, your program should output "Yum!".

2. Extend your solution to exercise 1 so that it outputs "Yuck!" if they enter *Brussel sprouts*.

3. Write a program that asks the user to enter five integers. Output a message that tells them if each integer is even or odd.

Extension:

Fizzbuzz is a game where you count out loud but replace some numbers. If the number is divisible by 3, you say "Fizz" instead, if it is divisible by 5, you say "Buzz" instead, but if it is divisible by 15, you say "Fizzbuzz" instead.

Write a program that counts up from 1 to 30 in this way.

Activity 5: Counting even numbers

Add the lines of code shown on the board and test that your program works correctly.

Here is an example of the expected output:

```
Enter a number 12
Even
Enter a number 19
Odd
Enter a number 87
Odd
Enter a number 3
Odd
Enter a number 8
Even
There were 2 even numbers
```

Activity 6: Boolean operators

Without running the code, predict the output of these programs:

1.

```
name = input("Enter your name ")
password = input("What is your password? ")
if name == "Fred" and password == "letmein":
    print("Success! You entered the correct values")
else:
    print("Sorry, that's wrong")
```

What do you think will be output if the user enters:

a) *Fred* and *password123*

Answer:

b) *Fred* and *letmein*

Answer:

c) *Sue* and *letmein*

Answer:

2.

```
member = input("Are you a member? (Y/N) ")
ticket = input("Have you bought a ticket? (Y/N) ")
if member == "Y" or ticket == "Y":
    print("Welcome, please come in!")
else:
    print("No entry for you!")
```

What do you think will be output if the user enters:

a) *Y* and *Y*

Answer:

b) *Y* and *N*

Answer:

c) *N* and *Y*

Answer:

3) *N* and *N*

Answer:

Activity 7: Boolean operators in a loop

Write a program that asks the user to enter five colours using a loop. Count how many of them are primary colours (red, yellow, blue) and output this at the end of the program.