# Activities solution

**Boolean Logic**

1. **True and False and True and False**

Answer: False

1. **True and True and True or False**

Answer: True

1. **True and True and True or False or not True or False and True and False**

Answer: True

1. **not False and False and True or False and True or False and False or True**

Answer: True

1. **False or True or not False or False**

Answer: True

1. **False and False and not True or False**

Answer: False

**Boolean Comparison**

**Challenge 1**

Copy the example above and then extend it to include prompts for user input. The input should be used to set the distance and age variables only.

The requirements have been amended to state that the school is a secondary school. The students should be less than 18 years old but older than 10. Write these new conditions into your program and test it.

**Answer:**

print("This program works out eligibility for Secondary School enrolment....\n")

print("Student should be 10 to 18 year old ")

distance\_from\_school = float(input('Enter Distance in Kilometers: '))

age\_in\_years = int(input('Enter Student age: '))

has\_residency = True

is\_fee\_foreign = False

# Test case assertion

print("The student's eligibility to enrol is ",

distance\_from\_school < 4

and age\_in\_years < 18

and age\_in\_years >10

and has\_residency

or age\_in\_years < 18

and age\_in\_years >10

and is\_fee\_foreign, "\n")

**Challenge 2**

The manager of a bar needs an application to help door staff vet the patrons. The application must meet the following requirements:

It prompts the user to enter the patron's year of birth and then their name

If the person is less than 21 years old, then the application returns False

The following patrons are not welcome at the bar:

Suzanne May

Wiremu Rangi

If these names are entered the application must return False.

**Answers:**

print("Welcome to the Bar\n")

print("Please provide your details to vet the patrons")

name = input('Enter your full name:')

name=name.lower()

age\_in\_years = int(input('Enter your year of birth i.e (1999)'))

print(" You can enter in bar: ",

name!="wiremu rangi" and

name != "suzanne may" and

age\_in\_years <2000, "\n")