Exercises: Conditions

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1. A certain cinema currently sells tickets for a full price of £6, but always sells tickets for half price to people who are less than 16 years old, and for a third of the price for people who are 60 years old or more. Write a program so that it produces the output below. Use the string `format()` method when printing the output. Take a look at section: 'The Pythonic Way: The string method "format"' for more information.

```
Enter your age: 63
Your ticket costs 2.00 pounds.
```

2. In a certain country, people are required to do jury service if they are between the ages of 18 and 65 (inclusive) and do not have a criminal record. Otherwise they are excluded from jury service. Use `if-else` statements to write a program, which allows the user to test if they are required to do jury service. The program should prompt for the user's age and checks whether they have a criminal record as in the following example input/output:

```
Enter your age: 19
Do you have a criminal record (y/n): p

Incorrect input.
```

or

```
Enter your age: 20
Do you have a criminal record (y/n): n

You are required to do jury service.
```

or

```
Enter your age: 35
Do you have a criminal record (y/n): y

You are excluded from jury service.
```

3. A certain company gives all employees a Christmas bonus of £50. In addition, it gives people it has employed for 10 years or more an extra £50 (making a total of £100), and people it has employed for 20 years or more an extra £100 (making a total of £150). Write a program that prompts an employee for his or her number

of years of employment and then outputs the amount of Christmas bonus, as in the following example input/output:

```
How many years have you been with the company? 16
You will receive a Christmas bonus of 100 pounds.
```

4. Write a program called `random_tickets.py` which tells the user whether or not they have won tickets for a concert. There is a 1 in 15 chance of winning 3 tickets, a 2 in 15 chance of winning 2 tickets, and a 4 in 15 chance of winning 1 ticket. Hint: use the Python random.randrange() function. The program should output a message to the user such as:

```
You have won 1 ticket.
```

or:

```
You have won 3 tickets.
```

Assessed Question: Leap Year

Write a program that can determine whether a year entered by the user is a leap year (i.e. has 366 days). A year is a leap year if it is divisible by four, except that any year divisible by 100 is a leap year only if it is also divisible by 400. The program will produce output such as:

```
1984 is a leap year.
```

```
2018 is not a leap year.
```

Further problems can be found at: https://www.codestepbystep.com

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