

Selection		
<p>Ask for a number and choose a response:</p> <pre>num = int(input("Enter school year: ")) if num == 10:     print("Correct!") else:     print("Erm... no it isn't")</pre>	What colour are the words <b>if</b> and <b>else</b> ?	
	What does this mean?	
	Why is there a double equals (==)?	
	What symbol do you need on the <b>if</b> line?	
	How do you know what it is inside the <b>if</b> statement?	
<p>Use a different boolean operator</p> <pre>num = int(input("Enter your age: ")) if num &lt; 18:     print("You are a minor") else:     print("You are an adult")</pre>	What does the <b>&lt;</b> symbol mean?	
	What will happen if the user enters <b>17</b> ?	
	What will happen if the user enters <b>18</b> ?	
	How else could you write the <b>if</b> statement to test for ages 17 or less?	

Selection		
<p>Use a different boolean operator</p> <pre> name = input("Best teacher: ") if name != "Mr. Clarkson":     print("Wrong!")     response = "mean" else:     print("Quite right!")     response = "intelligent"  print("You are clearly", response) </pre>	What does the <code>!=</code> operator mean?	
	Why don't you need an <code>int(input())</code> for this program?	
	Describe exactly what happens if the user types in "Mr. Fairbairn"	
	Explain how the program knows which lines of code to execute and which lines to ignore	
<pre> score = int(input("Enter score: ")) if score &gt;= 90:     print("A*, well done!") elif score &gt;= 80:     print("A for Awesome!") elif score &gt;= 70:     print("B for Brilliant!") elif score &gt;= 60:     print("C, not bad.") else:     print("Keep trying!") </pre>	What does <b>elif</b> mean?	
	What is the maximum number of <b>elifs</b> you can have?	
	If the user types enters 90, why aren't all of the lines executed?	
	Explain why it is always a good idea to have an <b>else</b> option at the end.	

## Selection

### Advice Please

Write a program that asks the user if they would like some advice. If they enter Y, provide them with an amusing message.

Would you like some advice?

Input

Y

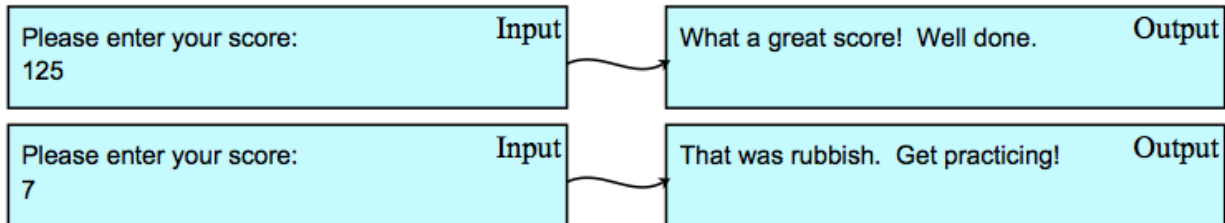
Always know where your towel is.

Output

## Selection

### Darts

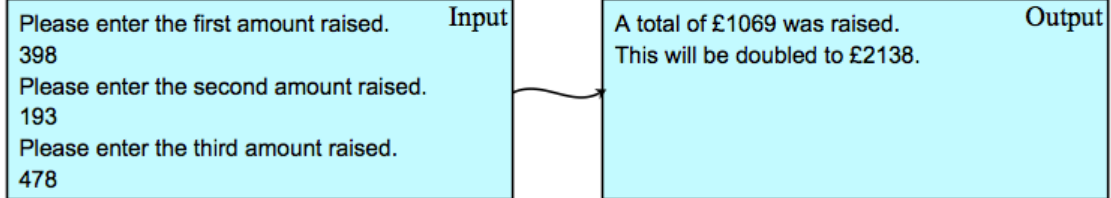
During a game of darts, the highest score that can be achieved in a single turn is 180. The lowest is 0. Write a program that will allow a dart player to enter their score. The program should congratulate the player if their score was over 100. If the player scores less than 10 they should be told that some practice is required.



## Selection

### Charity Collection

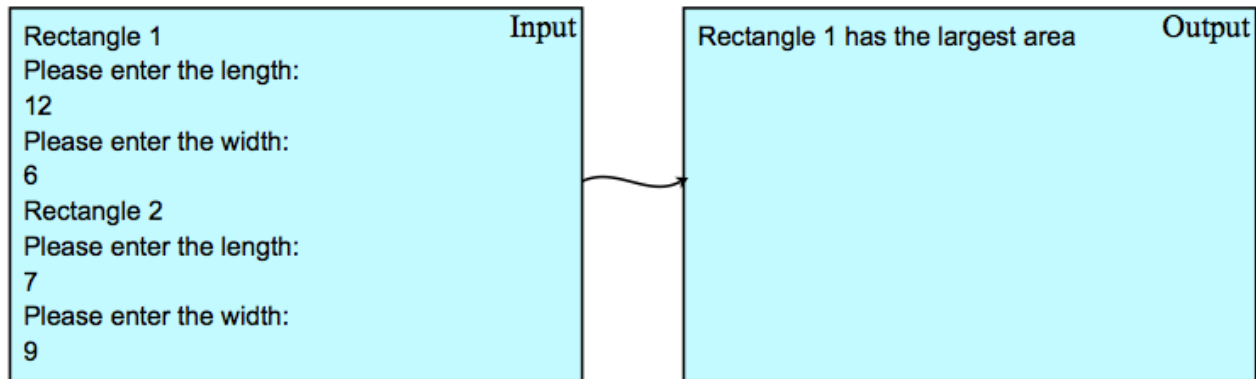
Three friends have been collecting money for charity. A local company has offered to double the amount of money they collect if they raise over £1000. Write a program that allows the friends to enter their individual amounts. The program should then add the three amounts and store the total. If the total is greater or equal to 1000 the total should be doubled. Finally the total should be displayed.



## Selection

### Calculate the Area of a Rectangle (Part 2)

Program 5 asked you to calculate the area of a rectangle. Expand this program so that it calculates the area of two rectangles. Once both areas have been calculated your program should decide which rectangle has the larger area and display a suitable message.



## Selection

### Advice Please (Part 2)

Expand program 1 to include an alternative message if the user types N. An error message should be given to the user if they enter anything other than Y or N.



## Selection

### Tyre & Brake Wear

As a car's tyres and brakes wear out it takes longer for a car to stop. A list of recommended stopping distances are shown below.

20 miles per hour	6 metres to stop
30mph	14m
40mph	24m
50mph	38m
60mph	55m
70mph	75m

Write a program to analyse a braking distance test. The user should be asked to enter the speed (mph) they were doing and the distance (m) it took them to stop. If the distance is longer than the recommended stopping distance the user should be advised to go for a tyre and brake check.

Please enter the test speed (mph).      **Input**  
40  
Please enter the tested stopping distance (m).  
26.7

**Output**  
Your car failed the braking distance test.  
Submit your car for a tyre & brake test soon.



## Selection

### Solid, Liquid, Gas

At normal atmospheric pressure, water changes state to a solid at 0°C or below and a gas at 100°C or above. It remains a liquid at any other temperature. Write a program that will return “solid”, “liquid” or “gas” to the user depending on the temperature they enter.

Enter the current temperature.

Input

78

At 78 degrees centigrade,  
water will be a liquid.

Output

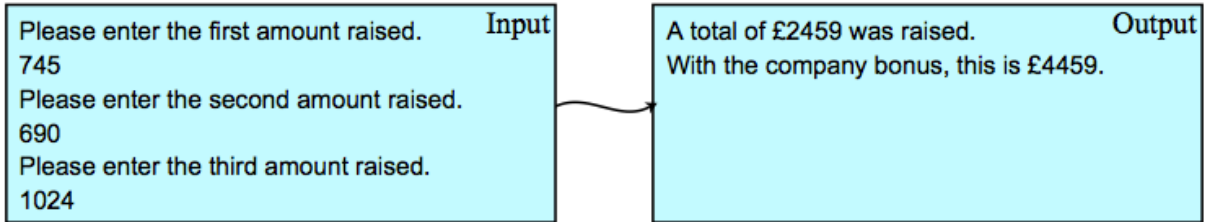
## Selection

### Charity Collection (Part 2)

The local company have decided that due to current financial pressure than can not afford to double any amount of money raised over £1000. The following new decisions are made:

- any amount raised less than £1000 has a £100 bonus (for example £345 raised = £445 total)
- the company will still double the amount raised between £1000 and £2000 (for example £1282 raised = £2564 total)
- if the amount is over £2000 the initial £2000 is doubled but any amount after that is not (for example £2054 raised =  $2 * £2000 + £54 = £4054$  total)

Rewrite program 15 to take account of the above decisions.



## Selection