

### Task 1: Calculator

Write a program that allows user to enter two numbers, and operator and then completes the calculation.

Follow the instructions below:

1. 1. Ask the user to pick a number
2. 2. Ask the user to pick a second number
3. 3. Ask the user to pick an operator
4. 4. Create an IF statement to carry out the math operation using the users choice of numbers and choice of operator

### Task 2: Joke Display

Write a program that asks a user for their favourite number between 1 and 100 and then tells them a joke based on the number. You should use a minimum of 3 jokes

[https://www.w3schools.com/python/ref\\_func\\_input.asp](https://www.w3schools.com/python/ref_func_input.asp)

Follow the instructions below:

1. Ask the user to pick a number and store against variable
2. Create an IF statement which uses logical operators which prints out a joke based on the number the user picked

### Task 3: ATM

Write a program that simulates the behaviour of a basic ATM.

Follow the instructions below:

1. Print a main menu:

Welcome to Northern Frock

2. 1 - Display balance
3. 2 - Withdraw funds
4. 3 - Deposit funds

5. 9 - Return card

Enter an option:

6. If '1' is entered, display the current balance and the maximum amount available for withdrawal (must be a multiple of £10), and return to main menu.

7. If '2' is entered, print a sub-menu with withdrawal amounts of:

Please select withdrawal amount

8. 1 - £10

9. 2 - £20

10. 3 - £40

11. 4 - £60

12. 5 - £80

13. 6 - £100

14. 7 - Other amount

15. 8 - Return to main menu

Enter an option:

a. If '1 to 6' is selected check that the requested withdrawal is allowed, print a message to show that the money has been withdrawn, calculate the new balance and return to main menu.

b. If '7' is selected, then prompt the user for an integer value. Check this number is a multiple of 10 and that the withdrawal is permitted, print a message to show that the money has been withdrawn, calculate the new balance and return to main menu.

c. If '8' is selected return to main menu.

16. If '3' is entered, provide another menu that will allow the user to enter an amount to deposit (does not need to be a multiple of £10), return to main menu or return card. If funds are deposited, provide appropriate feedback and update the balance and return to main menu.

17. If '9' is entered, print a goodbye message and exit (break).

18. If another value is entered, print an error message and print the menu again.

#### Task 4: Lists

Create 3 different programs to practice using lists.

1. Creates a list of three fruits:
  - Outputs all the fruits in the list
  - Outputs the second fruit in the list
2. Creates a set of three fruits:
  - Outputs all the fruits in the set
  - Adds a new fruit to the set
  - Outputs all the fruits in the set
  - Tries to add a repeat of a fruit to the set
  - Outputs all the fruits in the set
3. Creates a dictionary of three fruits with a corresponding price:
  - Outputs all the fruits in the dictionary
  - Outputs the price of the second fruit in the dictionary
  - For a given fruit output its price if it is the dictionary or a message if it is not

### Marking Criteria Task 1-4

	Pass	Merit	Distinction
<b>Syntax</b>	<ul style="list-style-type: none"> <li>Attempts to use Python syntax with some success</li> </ul>	<ul style="list-style-type: none"> <li>Python syntax is largely accurate with some errors</li> </ul>	<ul style="list-style-type: none"> <li>Python syntax is consistently accurate and appropriate to the task</li> </ul>

### Marking criteria Task 1

	Pass	Merit	Distinction
<b>Code</b>	<ul style="list-style-type: none"> <li>Hard codes in firstValue, secondValue, and operator</li> <li>Uses if statements to analyse the operator and provides an answer to console</li> <li>Uses the basic 4 operators, (+, -, /, *)</li> </ul>	<ul style="list-style-type: none"> <li>Accepts prompts for firstValue, secondValue, and an operation</li> <li>Does not handle errors when the user inputs invalid values (input a word instead of a number, input something that isn't one of the 5 symbols for operators)</li> <li>Uses if statements to identify the symbol being used</li> <li>Points to methods that print the answer to console</li> <li>Prints the correct value to the screen in any format</li> </ul>	<ul style="list-style-type: none"> <li>Accepts prompts for firstValue, secondValue, and an operation</li> <li>Handles errors when the user inputs invalid values (input a word instead of a number, input something that isn't one of the 5 symbols for operators)</li> <li>Correctly builds a method for each operator</li> <li>Prints the correct value for the sum being requested of the program</li> </ul>

### Marking criteria Task 2

	Pass	Merit	Distinction
<b>Code</b>	<ul style="list-style-type: none"> <li>Attempts to prompt the user to input a number and store against a variable</li> <li>Tries to create an IF statement to return a joke to user</li> </ul>	<ul style="list-style-type: none"> <li>Successfully prompts the user to input a number and store against variable</li> <li>Creates an IF statement with the use of logical operators to print out the appropriate joke</li> </ul>	<ul style="list-style-type: none"> <li>Successfully turns this program into a function  <a href="https://www.w3schools.com/python/python_function.asp">https://www.w3schools.com/python/python_function.asp</a> </li> </ul>

### Marking criteria Task 3

	Pass	Merit	Distinction
Code	<ul style="list-style-type: none"> <li>Prints a menu for the user</li> <li>Attempts to prompt the user to enter a value to display balance or withdraw money</li> <li>If appropriate attempts to prompt user to enter amount to withdraw</li> </ul>	<ul style="list-style-type: none"> <li>Prints a menu for the user</li> <li>Successfully prompts the user to enter a value to display balance or withdraw money</li> <li>Successfully prompts user to enter amount to withdraw, prints an appropriate message to user to calculate and print balance</li> <li>Successfully prompts the user for an integer values and check this number is a multiple of 10 and that the withdrawal is permitted</li> <li>Prints an appropriate goodbye message</li> <li>Prints an appropriate error message</li> </ul>	<ul style="list-style-type: none"> <li>Successfully turns this program into a function  <a href="https://www.w3schools.com/python/python_functions.asp">https://www.w3schools.com/python/python_functions.asp</a> </li> </ul>

### Marking criteria Task 4

	Pass	Merit	Distinction
Code	<ul style="list-style-type: none"> <li>Attempts to create a list containing 3 fruits</li> <li>Attempts to create a set containing 3 fruits</li> <li>Attempts to create a dictionary containing 3 fruits and a corresponding price</li> </ul>	<ul style="list-style-type: none"> <li>Successfully creates a list containing 3 fruits and output the second fruit in the list</li> <li>Successfully creates a set containing 3 fruits, adds a new fruit, outputs all fruits, tries to add a repeat fruit, outputs all fruits in the set</li> </ul>	<ul style="list-style-type: none"> <li>Successfully adds a loop to the program  <a href="https://www.w3schools.com/python/python_for_loops.asp">https://www.w3schools.com/python/python_for_loops.asp</a> </li> </ul>

		<ul style="list-style-type: none"><li>• Successfully creates a dictionary containing 3 fruits and a corresponding price</li><li>• Outputs the price of the second fruit</li><li>• For a given fruit output its price if it is the dictionary or an appropriate message if it is not</li></ul>	
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