Algorithm Template (Main Method Only)

Using a calculator to add four numbers. Ask for and store the four numbers as well as display a running total. Print the final total.

Inputs

|  |
| --- |
| Number1, number2, number3, number4 |

Processing

|  |
| --- |
| Prompt user for number1, number2, number3 and number4 (input)  Add number1, number2, number3 and number4 together to produce a running total  Store running total |

Output

|  |
| --- |
| Display running total |

Ask five students for their names and their ages. Print out the names and ages in ascending name order.

Inputs

|  |
| --- |
| S1name, s2name, s3name, s4name, s5name  S1age, s2age, s3age, s4age, s5age |

Processing

|  |
| --- |
| Prompt Student1 for their name and age  Store name (s1name)  Store age (s1age)  Prompt Student2 for their name and age  Store name (s2name)  Store age (s2age)  Prompt Student3 for their name and age  Store name (s3name)  Store age (s3age)  Prompt Student4 for their name and age  Store name (s4name)  Store age (s4age)  Prompt Student5 for their name and age  Store name (s5name)  Store age (s5age) |

Output

|  |
| --- |
| Display name and age of students in ascending order |

Describe al the steps involved from waking up in the morning to walking out the door – hopefully fed, washed, and dressed!

Inputs

|  |
| --- |
| Clothes, towel, toothbrush, toothpaste, Food, Clothes |

Processing

|  |
| --- |
| Get out of bed  Walk to the bathroom  Remove clothes  Take a shower  Grab towel (input)  Dry yourself  Put clothes on  Grab toothbrush (input)  Grab toothpaste (input)  Apply toothpaste to toothbrush  Brush teeth  Wash Face  Walk to kitchen  Make food  Eat food  Walk to the front door |

Output

|  |
| --- |
| Ready to leave the house |

Describe all the steps in ordering a pizza. Choose pizza type, crust type, size, quantity, extras like garlic bread and coke.

Inputs

|  |
| --- |
| Address, Payment Method, Phone, Quantity, Pizza type, Crust type, Pizza Size |

Processing

|  |
| --- |
| Grab Phone  Open the ordering app  Prompt for delivery address (input)  Ask for pizza type (Mexicana, Pepperoni, Margherita or Meat lovers)  Store pizza type  Ask for crust type (Thin, Classic or Deep dish)  Store crust type  Ask for pizza size (Small, Medium or Large)  Store pizza size  Prompt user for quantity of pizzas  Store quantity  Add extra (garlic bread & coke) or checkout with pizza only  Calculate total  Add payment method (input)  Process transaction |

Output

|  |
| --- |
| Order Complete |

Exercise 3.1 Computer scientists have the annoying habit of using common English words to mean something other than their common English meanings. For example, in English, statements and comments are the same thing, but in programs they are different.

1. In computer jargon, what’s the difference between a statement and a comment?

The difference between a statement and a comment is that a statement is a line of code that performs a computational task whereas a comment is used to explain how a certain line of code works, it’s key differences can be seen by looking at the two slashes a comment starts off with.

2. What does it mean to say that a program is portable?

When a program is said to be portable it means that it can run on various kinds of computers whereas a program that isn’t portable would only be able to run on specific types of computers.

Typically, a high-level language would be considered portable whereas a low-level language isn’t.

3. In common English, what does the word compile mean?

To produce something using information gathered from another source.

4. What is an executable? Why is that word used as a noun?

An executable is otherwise known as the object code and is the translated version of the source code. It is used as a noun as once you have the object code you can execute the program as many times as you want without needing to convert from source to object again.