Name: Class:

Task 1

The development lifecycle starts with the analysis stage.

Each of the tasks that are involved in this stage are in the table below. For each one, describe what is involved in the task.

|  |  |
| --- | --- |
| **Analysis tasks** | **Description** |
| Identification of the problem |  |
| Decomposition of the problem |  |
| Abstraction |  |
| Identification of the requirements |  |

Task 2

A weather app for a smartphone shows users today’s weather forecast in their area.

Abstraction is used in the creation of the app. Complete the table below to show those components that will be included, and those aspects that will be ignored or hidden.

The first row has been completed as an example.

|  |  |
| --- | --- |
| **Components included in weather app** | **Aspects that will be ignored** |
| The likely chance of rainfall as a percentage | The range of percentages that might be predicted |
|  |  |
|  |  |
|  |  |

Task 3

(a) A shop needs software to run their point of service tills. The tills need to scan barcodes and produce receipts for customers. Customers are able to pay by cash or card.

 Create a set of requirements by decomposing the problem.

 Requirements

(b) Explain the difference between ‘decomposition of the problem’ that is carried out in the Analysis stage and ‘decomposition’ which is carried out in the Design stage.

Task 4

A programmer has finished creating an app which converts a measurement in centimetres (cm) to the equivalent in inches. The app will only take measurements to two decimal places and it only allows conversions between 0 and 100 cm.

1 inch = 2.54 cm

Complete the test table that will be involved in testing. The final two columns can be left blank to be completed in the final testing of the program. The first row has been completed as an example for you.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test #** | **Test data** | **Test reason** | **Expected output** | **Actual output** | **Pass/Fail** |
| 1 | 2.54 | Number with two decimal places | 1 |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 7 |  |  |  |  |  |