# NEA Checklist

# System Analysis (Requirements):

Read the task, consider the project and identify the essential requirements.

Give each requirement a number and list them in a table such as shown below.

|  |  |
| --- | --- |
| **Number** | **Requirement** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |

# Design

This checklist only forms part of your possible design process, you may need to cover Networking, SQL, or complex User Interfaces. The boxes below form a guide of the minimum requirements that you must complete.

## Decomposition

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have decomposed the problem into smaller problems that can become subroutines |  |
| I have identified how all the requirements are covered in the smaller problems |  |

## Process

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have drawn a flowchart or written pseudocode or structured English for each subroutine |  |
| I have identified how all the requirements are covered in flowcharts, pseudocode or structured English |  |

## Variables

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have identified the names to be used for all variables in each subroutine |  |
| I have identified the names to be used for all global variables |  |
| I have explained why any global variables are needed |  |
| I have identified the data type to be used for each variable |  |
| I have given a reason (purpose) for each variable that will be used |  |

## Parameters

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have identified the parameters that will be passed into each subroutine |  |

## Return values

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have identified any values that will be returned by functions |  |

## Files

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have identified the filenames to be used for each file (if necessary) |  |
| I have identified the structure to be used for each file (if necessary) |  |

## Screens

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have designed a layout for each screen or included a screenshot of each screen |  |

Tick when you have covered each requirement for each design task (some may not be appropriate so just put a cross in its place)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Decomposition |  |  |  |  |  |  |  |  |  |  |
| Process |  |  |  |  |  |  |  |  |  |  |
| Variables |  |  |  |  |  |  |  |  |  |  |
| Parameters |  |  |  |  |  |  |  |  |  |  |
| Return values |  |  |  |  |  |  |  |  |  |  |
| Files |  |  |  |  |  |  |  |  |  |  |
| Screens |  |  |  |  |  |  |  |  |  |  |

# Development

## Code

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have included a full code listing in my report |  |
| I have used meaningful identifier names (1-3 marks) |  |
| I have used appropriate indentation (1-3 marks) |  |
| I have commented my code to explain what each part does (1-3 marks) |  |
| I have used constants appropriately where needed (4-6 marks) |  |
| I have used a consistent style throughout my code (4-6 marks) |  |
| I have used subroutines (modularisation) within my code (7-9 marks) |  |
| I have made appropriate use of local variables within subroutines (7-9 marks) |  |
| I have only used global variables if necessary (7-9 marks) |  |
| I have used validation wherever the user is expected to input data (7-9 marks) |  |
| I have used exception handling to avoid program errors (10-12 marks) |  |
| My code is self-documenting because sensible variable names have always been used and comments have always been used to explain every part (10-12 marks) |  |
| I have used interfaces (passing parameters) for subroutines (13-15 marks) |  |
| My subroutines perform one function each (cohesive) and are reused where appropriate (13-15 marks) |  |

Tick when you have covered each requirement, identified in section 1, within the code

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Coded |  |  |  |  |  |  |  |  |  |  |
| Commented |  |  |  |  |  |  |  |  |  |  |
| Evidenced |  |  |  |  |  |  |  |  |  |  |

# Testing

## Test plan

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have included a test number for every test |  |
| I have included a description for every test |  |
| I have included actual input data for every test |  |
| It is clear to a 3rd party tester where to input the data and what data to input |  |
| I have included actual data for the expected results |  |
| It is clear to a 3rd party tester what they should expect the output data to be and where to find it |  |
| I have covered all requirements in the test plan |  |
| I have covered a reasonable sample of routes throughout the program |  |
| I have checked the publicly available mark scheme to see what types of tests I should be carrying out |  |
| I have used tests that are designed to find problems in my code |  |

## Testing

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have run each test |  |
| I have shown evidence for each group of tests |  |
| My evidence includes input and output data |  |
| I have identified any failed tests (you should try to make sure you have at least one) |  |
| I have explained why any tests have failed |  |
| I have explained how I have corrected my code for any failed tests |  |
| I have re-run any failed tests |  |
| I have shown evidence for re-running any failed tests |  |

Tick when you have covered each requirement during testing, showing screenshots of the test.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Test plan |  |  |  |  |  |  |  |  |  |  |
| Tested |  |  |  |  |  |  |  |  |  |  |
| Evidenced |  |  |  |  |  |  |  |  |  |  |
| Failed tests |  |  |  |  |  |  |  |  |  |  |
| Errors corrected |  |  |  |  |  |  |  |  |  |  |

# Evaluation

## Evaluation against requirements

|  |  |
| --- | --- |
| **Task** | **Tick** |
| I have explained how each requirement was met in my solution |  |
| I have explained how my code is efficient |  |
| I have explained the reasons why I chose to write my code in an efficient way |  |
| I have explained how my code avoids program errors using validation and exception handling |  |
| I have explained the reasons why I chose to use the validation and exception techniques that I used |  |
| I have described potential improvements that could be made |  |
| I have explained how potential improvements could be achieved |  |

Tick when you have evaluated each requirement

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Evaluated |  |  |  |  |  |  |  |  |  |  |