

Appendix 2: analysis (SDD)

This is the start of the software development process and defines the extent of the software task. This is called the software specification. It is often the basis of a legal contract between the client (customer) and the software company writing the software.

Your analysis should include the following:

- ◆ Purpose: a general description of the purpose of the software.
- ◆ Scope: a list of the deliverables that the project will hand over to the client and/or end-user, eg design, completed program, test plan, test results and evaluation report. It can also include any time limits for the project.
- ◆ Boundaries: the limits that help to define what is in the project and what is not. It can also clarify any assumptions made by the software developers regarding the client's requirements.
- ◆ Functional requirements: the features and functions that must be delivered by the system in terms of inputs, processes and outputs.

Exemplar

Analysis	
Purpose	The purpose of this program is to take 20 pupil names, their prelim marks and their assignment marks from a file. Calculate the percentage, and then find and display the name and percentage of the pupil with the highest percentage.
Scope	This development involves creating a modular program. The deliverables include: ◆ detailed design of the program structure ◆ test plan with completed test data table ◆ working program ◆ results of testing ◆ evaluation report This development work must be completed within 4 hours.
Boundaries	The program will read the pupil data (name, prelim mark and assignment mark) for 20 pupils from a sequential file. The data is accurate, so there is no need to implement input validation. The pupil with the top mark will be the pupil who has the highest percentage. The only output needed is the name and percentage of the pupil with the highest percentage.

Analysis	
Functional requirements	These are defined in terms of the inputs, processes and outputs detailed below. All inputs are imported from a sequential file and all outputs displayed on the screen. The program is activated by double clicking on the file icon and then selecting “Run” from the menu. Each process should be a separate procedure or function that is called from the main program. Inputs: Pupil name Prelim mark Assignment mark Processes: Calculate the percentage for each pupil Find the name and percentage of the pupil with the highest percentage Output: Name of the pupil with the highest percentage The highest percentage