

//First draft

Evaluation of the project implemented in Digital/Quartus:

Stage I: design of the instruction set, data path, and microinstructions – maximum 60 points,

Stage II: design of the simplified control unit and instruction fetch unit – maximum 25 points,

Stage III: design of the complete control unit and memory manager; implementation and simulation of the developed CPU components and execution of a sample processor program using Digital or Quartus II – 15 points.

To receive points for Stage II, the elements associated with Stage I must be designed correctly. Similarly, to receive points for Stage III, the elements associated with Stage II must be designed correctly. In Stage III, the CPU design **MUST** compile without errors in Digital / Quartus II, and a representative program performing calculations on the CPU must be prepared (the program should be provided as a MIF file within the project).

Evaluation of the project implemented as a software simulation:

Stage I: design of the instruction set and microinstructions, logic implementing data path functions – maximum 60 points,

Stage II: implementation of the CPU and memory simulator (including a simplified GUI) – maximum 25 points,

Stage III: implementation of the complete simulator including a sample application – 15 points.

To receive points for Stage II, the elements associated with Stage I must be designed correctly. Similarly, to receive points for Stage III, the elements associated with Stage II must be designed correctly.