HACETTEPE UNIVERSITY
DEPARTMENT OF COMPUTER ENGINEERING
BBM436 MICROPROCESSORS LAB.
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ASSIGNMENT 2

Topic
The use of Proteus and Minecraft for microprocessors lab.
Equipment cannot be used in this laboratory, which has to be built remotely due to covid-19.
However, the information to be obtained here will be tried to be provided by simulation tools
and software in computer environment.

The Proteus product of Labcenter (https://www.labcenter.com), which can be used from
schematic drawing to PCB printing, will be used in this study. In the studies, especially the
schematic study and simulation sections of this software will be used. Microsoft's software
called Minecraft (https://www.minecraft.net) will also create a fun environment that combines
game and computer architecture in microprocessor design.

*P.S. You are required to submit your studies as a report at the end of the test period. In
particular, give each step requested from you by explaining them separately in your report. If
there are references you use, please include them in your report.*

Submit your work file by attaching it to your report.

Phase 1
Create a workspace for a lab lesson on your computer with Labcenter's Proteus or
Microsoft's Minecraft programs.

Phase 2
After installing these software, run the examples especially to gain a habit of using them.

Phase 3
Design and implementation an ALU, a Register in Proteus environment. Use the logic
analyzer during operation.

Phase 4
In particular, check out the sample compiler for the 8086 handler and the example of how to
simulate it.

Phase 5
Perform machine code extraction using the asembler and the C language GNU compilers.
View the code you have implemented with a HEX editor and add the screenshot to your work
report.