Week 3 – Computer design – negative numbers

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**Class:**

**Student numbers:**

**Student names:**

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# Section A- Investigation of hardware

Memories were the last piece of Von Neumann computer architecture, now you know hardware basics. Now is the time to use your knowledge and investigate one specific model computer of your choice. It can be a really old computer, your own device or even a future model that has been introduced by a tech power.

What is expected from you?

You must hand in your report following the APA style about your selected model. The minimum content of report is the explanation of hardware components and their specification and the design logic and pros and cons. Remember plagiarism will result to failure. The report is not expected to be a commercial info of the product, but your realisation and understanding of the product, after a detailed research about the model.

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| --- | --- |
| Checklist  report | Remark |
| Professional coherence (theme, format, etc.) |  |
| Information found and delivered |  |
|  |  |
| Front page |  |
| (Automatic) Table of contents |  |
| Section about work division |  |
| Reference list in compliance with APA style ( <http://www.apastyle.org/> ) |  |
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Note:

* For the report you can use the “APA style paper” of word templates.
* Citation generator <http://www.citationmachine.net/apa>

# Section B – Negative numbers

*Exercise 1*

Convert the given binary numbers to their decimal equivalent.

|  |  |
| --- | --- |
| **Signed - Binary** | **Decimal** |
| **10110010** | **-78** |
| **01011110** | **94** |
| **10010110** | **-106** |
| **10000100** | **-124** |
| **10000101** | **-123** |
| **10110111** | **-73** |
| **01101100** | **108** |