IT2120 - Computer Literacy - FINAL EXAM semester 20201

Le Minh Duc - 20200164

March 18, 2021

1 How to calculate the score of the test

- Complied to pdf file (1 points)
- Title (0.75 points): each line 0.25 points. It is necessary to have your correct full name and your correct student number.
- Format the document correctly: class, columns (0.5 points), Sectioning (0.5 points)
- Format the text correctly (0.5 points)
- Math (1.5 points): each equation 0.5 points
- Table (1.5 points)
- Figure (1.5 points): 0.5 points for the first figure, 1 points for the second figure.
- Create itemize and enumerate (0.5 points)
- Cross Ref (0.75 points): 0.25 each.
- Create table of content 0.5 points
- Create list of tables 0.25 points
- Create list of figures 0.25 points

2 Instructions

2.1 How to do

Students need to create this document using latex and follow **these below rules**:

1. Need to use "article" for document class, a4 paper size, two columns
2. Use commands for sectioning the document, putting the title, author name and date in the title
3. Use cross-referencing commands `\ref`.
4. Command `\mathbb{N}` in math environment create character like this $\mathbb{N}$
5. Use package `hyperref` in your document
6. Put the image file and Latex source file (.tex) in the same folder
7. Text in [...] are to be replaced with your corresponding information.

2.2 Submission

Duration: 90 minutes
When submission, student need to send to the email address: linhtd@soict.hust.edu.vn
Template of email title: [CL2020] - Your Full Name - Your student number.
Example: [CL2020] - Nguyen Van A - 20202020.
The email needs to have:

1. Latex source (.tex file).
2. All images inside the document.
3. Output pdf file.

Note: if the Latex file is not compiled, you will be penalized.

3 Mathematical formulas

Some notations:

- G_w denotes a graph containing all vertexes and edges of color w.
- Let's define w_e as follows

$$w_e = \begin{cases} 100 & \text{if } e \text{ has never been used} \\ 1 - f_e/\mathbb{W} & \text{otherwise} \end{cases} \quad (1)$$

- (s, d, n) denotes a demand to deliver n packages of goods form s to d

Some related equations:

$$\frac{d^2 r_i}{dt^2} = G \sum_{i \neq j} \frac{w_i w_j}{|r_j - r_i|^3} (r_j - r_i) \tag{2}$$

Replace the value of w_e from 1 to the Equation 2 and perform some manipulations, we finally obtain:

$$r_i = \int_{-\infty}^{\infty} f_i dt + \int_0^1 f_i dt \tag{3}$$

4 Tables and tabulars

When creating the table, start the basis table and then use the alignment methods. **Please fill the Table 1 with your information.**

Not.	Description	Value
$\mathbb{N}$	Student name	Le Minh Duc
$\mathbb{ID}$	Student number	20200164
g_m	Grade of Math exam	9
g_p	Grade of Physics exam	9
g_e	Grade of English exam	9
Final grade $= \frac{2 \times g_m + g_p + g_e}{4}$		9

Table 1: Student record

5 Figures

Download the images form these addresses:
`https://users.soict.hust.edu.vn/linhtd/examplelatex.png`
`https://users.soict.hust.edu.vn/linhtd/figure-topo.pdf`
In Figure 2, insert the image into the document so that so that the figures are sidy-by-side and the second one is up side down.

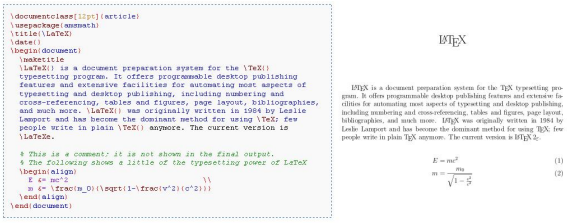
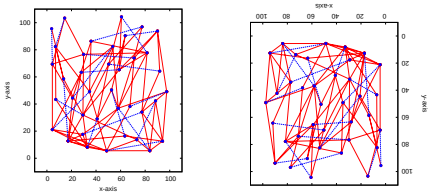


Figure 1: An example of a Latex document



(a) Before (b) After

Figure 2: Side by side figures with rotation

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