Report Introduction

Chosen Tool - Emacs

What is it

Emacs is a family of text editors that are:

- Extensible.
- Customizable.
- Self-documenting.
- Real-time display editor.

Programmer can write they own extension for their emacs.

Emacs's source code composited of 79% eLisp language, 21% C language.

What does it do

Emacs can do more than a editor, it is more like an integrated development environment, it supports:

- Script language EmacsLisp.
- Asynchronous processes.
- Interface separation.
- Org-mode.
- Emacs GUI can display image.

What might it be used for in general

Emacs can do:

- Write in many different human and programming/markup languages.
- Compile, run and test programs.
- Compare two files and highlight their differences.
- Manage files.
- Read news, mail and RSS feeds.
- Play games.

what primary/computing tool domain is it in

- Editor and IDE Configuration.

Justification

Reason of choosing Emacs

- Using emacs can improve my work efficiency as it support a lot of shortcut keys.

- Emacs support customization, I can write my own configuration to decorate and extent function for emacs.

- Emacs is a lightweight editor so it can compile, run and test programs faster than an IDE.

- Emacs support org-mode, a format of text. It can be used to writing schedules, to-do lists, notes and reports. Org-mode file can be exported into many different file formats.

- Conclusion: it is good for:
  - Writing and testing programs.
  - Writing and manage reports.
  - Time management.

Pre-requisite knowledge

- ☑ Experience of programming.
- ☑ Basic knowledge of editor.

Resource Search

Level 1

https://github.com/condy0919/emacs-newbie/blob/master/introduction-to-builtin-modes.md

This is a tutorial for emacs, which introduces the basic built in modes of emacs.

Level 2

http://ergoemacs.org/emacs/elisp.html

This is a tutorial for eLisp, which introduces how to programming in eLisp.

Level 3 and Level 4

These two-level is based on the knowledge I will study in level 1 and level 2, so there is no resource for these two-level.

Domain of Application - Editor and IDE

Emacs is a powerful extensible editor, if the user know how to write a configuration, emacs can even replace an IDE.

Editor perspective:

Emacs can be used to write report, it has org-mode which is for keeping notes, maintaining to-do lists, planning projects, authoring documents, computational notebooks, literate programming and more.

IDE perspective:

Emacs can be used to write program, it can be used to compile, run and test program, it supports auto-complete of different languages.

References

- Emacs In Wikipedia. Retrieved from https://en.wikipedia.org/wiki/Emacs
- Bozhidar Batsov. (2011). Why Emacs? Retrieved from https://batsov.com/articles/2011/11/19/why-emacs/
- Zhihu. (2015). How to use org-mode correctly. Retrieved from https://www.zhihu.com/question/26964808

Self-Assessment Instrument

INFO1111 2021 Sem 1 : Self-Assessment Instrument

Individual Strengths and Needs + Planning

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Enter the **three strengths** that you believe you have that are most significant to your ability to work in the computing field.

The ability of self-learning
Patience
Information searching

Additional notes
Enter here any additional explanatory notes regarding these strengths and weaknesses and how they should be interpreted.

The ability of self-learning means learning without other people's help, choosing study topic, study materials by myself. Patience means the ability to continue working while facing some difficult problem rather than just give up. Information searching means searching for things I want from the Internet, article, book, etc., and organise them.

Enter the **three area for further development** that you believe are most important in improving your ability to work in the computing field.

Communication
Report writing
Time management

Communication includes exchange idea with teammates, explaining the program to clients. Report writing means concluding work that has done. Time management means making a schedule for work and following the plan.

Previous Experience, etc.
Prove a brief outline of your previous experience

Already known how to write C/C++, Java, Python, C# code. Had made one game. Know something about the computer system. Know how to write an Arduino program. Know how to write an application on android os.

Career Ambitions
Provide a brief summary of your career ambitions

Working in a game company like Nintendo, make interesting games, create my own game IP.

Plan for undertaking development

Area 1:
Communication

Analysis of the need
Communication might helps in teamwork and explaining the program to clients.

Plan for undertaking development
Be more active during the tutorial, exchange my idea with my teammate and discuss that.

Area 2:
Report writing

Analysis of the need
Report writing might help to facilitate the formulation of the work plan and let other members know the progress of my work.

Plan for undertaking development
Review my progress at each stage of the work, think about what I have done and how is it going, and write it down.

Area 3:
Time management

Analysis of the need
Time management might contribute to greater productivity, efficiency and lead to the better work quality.

Plan for undertaking development
Always make a schedule before starting to work, follow the schedule while working.

Tool proposal

Self-learning topic proposal

Primary/Computing Tool	Computer science			
Domain of Application	Editor and IDE Configuration			
Topic:	Emacs			
Description	Emacs is a family of text editors that are extensible, customizable, self-documenting and real-time display.			
Why is this relevant:	As a computer science major I can write my own configuration of emacs, using emacs instead of IDE to write, compile, run and test my program.			
Why will this be beneficial?	It is good for writing and testing programs, writing and manage reports and time management.			
	Outcomes	**Description of what will be delivered**	**Included Artifact**	
Level 1 - Basic Application	I will be able to use emacs (without any configuration): Know the main shortcut keys. Know how to browse documents. Be familiar with basic operation.	A report describing the basic operation, shortcut keys.		
Level 2 - Basic Knowledge	I will be able to write eLisp programming language, which is required in writing the configuration of emacs.	A report (in addition to Level 1 content) including a note of elisp learning. It will including the basic function, command, script and data structure of emacs.		
Level 3 - Advanced Application	I will be able to read and analyse other people's configuration.	A report (in addition to Level 2 content) including an analytical report of the configuration of others.	A link to the analyzed configuration.	
Level 4 - Advanced Knowledge	I will be able to modify other's configuration and add some new features into the configuration.	A report (in addition to Level 3 content) including the reason why I make the change of the configuration and explain the new feature.		
Next step	I will be able to write my configuration, emacs can be used to write, compile and run programs, write notes, make a to-do list with this configuration.	My code of configuration.	A github link with my own configuration.	