



ASSESSMENT TASK NOTIFICATION

COURSE	Year 12 Software Design and Development
TASK TITLE	Assessment Task 3: Python Programming Task and documentation
TASK WEIGHT	30%
DATE OF NOTIFICATION	8 May 2023
DUE DATE	Term 2 Friday - 9am 12 June 2023

OUTCOMES ASSESSED

You will be assessed on your demonstration of the following outcomes:

- H3.2 constructs software solutions that address legal, social and ethical issues
- H4.2 applies appropriate development methods to solve software problems
- H4.3 applies a modular approach to implement well-structured software solutions and evaluates their effectiveness
- H5.1 applies project management techniques to maximise the productivity of the software development
- H5.2 creates and justifies the need for the various types of documentation required for a software solution
- H5.3 selects and applies appropriate software to facilitate the design and development of software solutions
- H6.3 uses and describes a collaborative approach during the software development cycle

TASK DESCRIPTION

Task Description: Create a program and project documentation as itemised in pg2 Marking Guidelines. This will demonstrate your communication and research skills, project management and modelling techniques and the coding skills that you have learned in this course.

Language to Use: Python 3 and pygame.

Software Development Approach: You - *the developer* is using the 'structured' approaches 5 distinct stages of Software Development Cycle (SDC), to produce a high quality software solution with known requirements that meets (the teacher) – *the clients* expectations as itemised in pg2 Marking Guidelines. Completion due date and time is the milestone. Stage 1 'Define and Understand the problem' Ask the client questions.

Project Documentation: Use and edit page 3 and 4 'Attachment 1 to create the documentation items as per marking guidelines. see 'Hints' page in 12SDD Canvas Module 24

MARKING

You will be assessed on your:

- Knowledge of legal, social, and ethical issues and their effect on software design and development.
- Skills in designing and developing software solutions.
- Skills in management appropriate to the design and development of software solutions.
- Skills in communication associated with the design and development of software solutions.

as outlined in Marking Guidelines.

Head Teacher: Rob Newell: Head Teacher of TAS

With regards to Illness/Misadventure, Absence or submitting an Application for Extension, students must follow the policy as outlined in your copy of the Assessment Handbook, which is also available on our website and the Millennium Student Portal.

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AT

Marking Guidelines	Outstanding	HIGH	SOUND	BASIC	LIMITED	
Issues related to software design 1: Comments in all functions also includes Author, date, purpose (any broken code is retained) 2: Document Coding RESEARCH - At least three web references 3: Logbook - References of all source code including the tutorial code as- sentdex at pythonprogramming.net/pygame . 4: Game Help function is working, user friendly and inclusive. 5: Game Menu and User Interface has less than 3 spelling errors.	All items are completed to an outstanding level 15 -12 marks	Some or all are completed to a high level 12-9 marks	Some or all are completed to a sound level 9-6 marks	Some or all are completed to a basic level 6-3 marks	Some are completed to a limited level 3-0 marks	15 marks
<i>Using creativity and a depth in understanding of coding to expand original tutorials on Pygame into a new game. Be sure to include and document more advanced features and /or levels.</i> 1. The game includes collision detection that has relative boundaries that are close to the visual size of the objects and frame boundary. 2. Document and add new screen design - 3 new screen elements that are appropriately placed. 3. Document and add 3 features of either interactivity/levels/ interest/animation to the tutorial game play 4. Document and add a new look Menu User Interface that refers to the user by name, HELP instructions. 5. Most or all code working as expected. Add all comments and code to documentation. 6. Modularised approach to coding is attempted and documented , Main game loop is a separate file. 7. Document and add Three new variables and three new subprograms with new meaningful names. 8. Test Report of final game: 3 tests, computer specs, user feedback, developer observations, type of user. 9. Evaluation of the effectiveness of the software solution: compare to original design specs (include a checklist) 10. Maintenance: discussion of future considerations, or possible updates (3 sentences)	All items are completed to an outstanding level 30- 24 marks	Some or all are completed to a high level 24-18 marks	Some or all are completed to a sound level 18-12 marks	Some or all are completed to a basic level 12-6 marks	Some or all are completed to a limited level 6-0 marks	30 marks
Managing and Documenting: 1. Design specifications : create a table of 3 user and 3 developer specifications. Create project management tools. 2. Logbook – dates, issues, solutions, see yellow documentation to include in logbook. 3. Gantt chart – Dates, 5 stages of development each with a sub-task, one milestone (due date). Create modelling tools to fully describe the solution. 4. Context Diagram – Inputs, Outputs, and external entities. 5. Structure Chart – main program and subprograms 6. Storyboards or game screens, titles, and links. Use of software 7. Uses Excel or Google spreadsheet program to create Gantt chart. 8. Uses Word processing: format headings, cover page, TableOfContents(TOC), details in header, page numbers. 9. Inserts linked spreadsheet object into the word file. Include spreadsheet file in assessment folder. 10. Electronic drawing to create: Context diagram, structure chart and storyboards.	All items are completed to an outstanding level 30- 24 marks	Some or all are completed to a high level 24-18 marks	Some or all are completed to a sound level 18-12 marks	Some or all are completed to a basic level 12-6 marks	Some or all are completed to a limited level 6-0 marks	30 marks
Communication skills associated with software design and development : 1: Uses ' GITHUB '. Create account and add final project to GITHUB and share link to teacher by due date -time. 2: Uses ' stack overflow '. Create account and posts. 3: Logbook : stack overflow posts and github commits are documented in log. 4: Logbook : new screen element, feature, variable, subprogram is documented and itemised. 5: Assessment folders and files are organised, named, documentation prints correctly.	All items are completed to an outstanding level 15 -12 marks	Some or all are completed to a high level 12-9 marks	Some or all are completed to a sound level 9-6 marks	Some or all are completed to a basic level 6-3 marks	Some or all are completed to a limited level 3-0 marks	15 marks

Attachment 1: [Assessment Task project documentation](#)

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1. “program name” Design Specifications

(See 12SDD textbook page 117 see ‘hints’ page module 24)

2. “program name” Log book

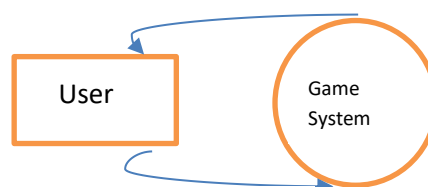
(see [SDD course specifications](#) Page 22)

Date /Time	Description of progress	Tasks achieved	Issues- stumbling blocks	references

3. “program name” Gantt chart

Embed spreadsheet object here see hints page module 24

4. “program name” Context Diagram

(see [SDD course specifications](#) Page 13)

5. “program name” Structure Chart

(see [SDD course specifications](#) see hints page module 24)

6. “program name” Storyboard

(see [SDD course specifications](#) Page 20)

7.“program name” Test Report of final game:

User level of IT experience	Computer specs	Users feedback	Developer's observations of user	Performance/ Errors

8.“program name” Evaluation :

the effectiveness of the final software solution compared to 1. design specifications (checklist)

9.“program name” Maintenance:

A discussion of future possible features to add to pygame or technology considerations (3 sentences)

10.‘program code’

Copy and paste all your pygame code (include comments) below.