An Interactive Web Application to motivate learning of programming

A Study carried out by Gyokay Ali

The aim of this project is to develop an innovative learning application/website for Year 1 CIS students to learn programming basics by “doing”. The long term goal is to motivate learners. The proposed web application will let the students to practice a chosen programming language on their own. The exact programming language and motivating methods are not decided yet, but it will be clear after this questionnaire. Basically, help me to help you.

Please read the disclaimer carefully and if you accept them you can move on to the questions. If you have any queries about the questionnaire or just want to know the results and final product at the end, please feel free to contact me at ag306@gre.ac.uk and I will get back to you ASAP.

DISCLAIMER

Thank you for agreeing to participate in this study, which is being conducted by Gyokay Ali, a student at the University of Greenwich, as part of the project for their BSc Software Engineering. The project is supervised by Dr Yasmine Arafa.

The Questionnaire:

• As part of this study, you will be asked to fill out a questionnaire.

• The purpose of the study is to collect data about students’ experiences with various programming languages. To check what is a potential method that will motivate them to learn or practice one. And to get opinion and suggestions from the students, if have any possible.

• While you are under no obligation to answer any of the questions we would appreciate if you could provide an answer to all of the questions.

• The entire process should take about 5 minutes at the most of your time.

• If at any time you wish to withdraw from the study, you can do so.

What we will do with your answers:

• The answers you provide will be analyzed and the data will be stored.

• We will keep the data for research purposes only. Some of the data we have gathered may be published as part of the project report.

• All data gathered will be destroyed on completion of the project.

For further information about this study please contact:

Gyokay Ali

Email: ag306@gre.ac.uk

Dr Yasmine Arafa

Faculty of Architecture, Computing and Humanities

University of Greenwich,

Old Royal Naval College, London SE10 9LS

Tel: 020 8331 8388

Email: Y.Arafa@gre.ac.uk

How good do you think you are in Programming? Even if it is only one language.

* No knowledge
* Beginner
* Intermediate
* Advanced
* Expert

Which Programming languages do you know already?

* Java
* C#
* JavaScript
* Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Could you rate your level of confidence with the language/s you have chosen above? Please choose 5, if you say “I don’t know” or “I am not sure”.

Bad/Struggling **0 1 2 3 4 5 6 7 8 9 10** Very good/No problems

Which Programming language would you like to learn next or most?

* Java
* C#
* JavaScript
* Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Do you struggle with any of the following?

* Operators and Expressions
* Conditional Statements
* Loops
* Arrays
* Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you think the traditional teaching of programming might be improved?

Do you think little games implemented in such application will make you more motivated to learn/practice a Programming language?

* Yes
* No

Do you think quizzes in such application will make you more motivated to learn/practice a Programming language?

* Yes
* No

What sort of game would be interesting to see in such environment? Any particular one that is not mentioned here? Please fill the box for the purpose.

* Puzzle with drag and drop
* Crossword puzzle
* Question challenge
* Labyrinth
* Card game

Any particular game that you would like to see, which is not mentioned above?

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What puts you off mostly when you are to study/practice programming?

* I am being distracted by other things
* It is not fun
* Lack of time
* I don’t see point in learning programming
* The material taught is not relevant to my expectations
* Programming seems very complicated to me
* Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which of the following online learning/self-study environments have you used?

* Scratch
* AppInventor
* CodinGame
* CodeCombat
* CODE.org
* Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Could you rate your experience with the learning environment/s you have chosen above? Were they helpful and motivating to you or not? Please choose 5 if you say “I don’t know” or “I am not sure”.

Not at all **0 1 2 3 4 5 6 7 8 9 10** Very helpful/motivating

What do you do like the most about the learning experience in the environments you chose above?

What was the worst about them?

What would you like to see that wasn’t included? How do you think they could be improved to enhance your learning experience?

Do you like the idea and goal of this project?

No **0 1 2 3 4 5** Yes

Would you have any suggestions to improve?