Your Next Course; STEM Course Selector for PSHS Students

A Project Write-up for a STEM Course Selector for and by PSHS Scholars

Computer Science 2 Quarter 2 Project

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Problem Statement

We've all had that phase where the only thing people would ask you is "what do you want to be when you grow up?" Now, as Pisay scholars, it's only upgraded to "What STEM course do you want to take?" Some of us had direct answers to both, a clear vision of their future, but others had a hard time choosing. Medicine or engineering? Technical or creative course? Questions like that ringed in our head every time we were asked that question, and it remained there, with no one to help us figure out our own set goal. That is a problem. Without knowing which direction you want to go after graduation—which will fly by faster than you expect—you wouldn't be able to pick an elective for senior high school. You won't know what topic actually catches your eye in the research subject, and many, many more people will repeat the question, "What STEM course do you want to take?" if these people do not figure out a course that calls to them.

Project Objectives

Objective 1

To aid Pisay students in picking a possible career path if they have not decided yet. Particularly before they reach grade 11 so they can choose which elective subjects to take based on the result of this quiz, or before graduation, basing off what electives they took in senior high school (grade 11-12).

Objective 2

To learn more about STEM careers to help even the gamemakers decide what course they can take.
For instance, one of the results required in this quiz is a physicist. We would have to research what a physicist's usual interests and required subjects are, therefore learning more about them, and if one gamemaker aligns their interests and subjects, then they can have the opportunity of being a physicist open to them.

Planned Features

Feature 1

Explanation presented to the user about the purpose of this STEM course selector (see **Project Objectives**)

Example (will be altered and changed in the coding process):

Hello, [user] ! This is a STEM selection course meant to help you pick a possible career in the future if you're struggling to choose. We understand that, after all, there are only so many things you can pursue. But before all of that, let's see what a past life looks like…

Feature 2

Alongside the result (a STEM course), here will be a list of possible electives and specific jobs assigned to the result.

Example:

You can become a Biologist in this life !

Possible electives to take (incoming grade 11-12):

- Biology core
- Anatomy elective
- Mathematics level 2 elective
- Biochemistry core
- Biophysics core

Possible Careers for a Biology Major

- Biology Researcher
- Pathology (Microbiology)
- Biomedical Engineer
- Biotechnologist
- Marine Biologist
- Biology Teacher/Professor (requires additional education degree)

Planned Inputs and Outputs

Input 1

The user will list electives they took or plan to take in their senior high school years

Input 2

The user will input their current interests and hobbies

Output 1

Introduction (see **Planned Features → Feature 1**)

Output 2

Result + Electives to take + Possible Career Paths (see **Planned Features → Feature 2**)

Logic Plans

Pseudocode

```
Function Main
    Declare String elective, choice
    Declare Integer menu

    Output "Please input your chosen elective or your future elective: "
    Output "Computer Science, Robotics, Engineering, Environmental Science, Physics, Chemistry, Biology, Math."
    Input elective
    If elective == "Computer Science"
        Call comscie
    Else
        If elective == "Robotics"
            Call rbot
        Else
            If elective == "Engineering"
                Call eng
            Else
                If elective == "Environmental Science"
                    Call envis
                Else
                    If elective == "Physics"
                        Call phy
                    Else
```

```
                    If elective == "Chemistry"
                        Call chem
                    Else
                        If elective == "Math"
                            Call math
                        Else
                            Output "Invalid response."
                        End
                    End
                End
            End
        End
    End
End

Function chem
End

Function comscie
    Declare Integer num
    Declare String job

    Output "Do you code for leisure or for purpose?"
    Output "Press 1 for leisure, press 2 for purpose."
    Input num
    If num == 1
        Output "Code games or code other things?"
        Output "Press 1 for games, press two for miscellaneous."
        Input num
        If num == 1
            Output "Code playable games or code things FOR games?"
            Output "Press 1 for active games, press 2 for game resources."
            Input num
            If num == 1
                Output "Your ideal STEM aligned profession is a game developer/engineer!"
            End
        Else
            Output "Quality of life improvers, or just for funsies?"
            Output "Press 1 for life, press 2 for fun"
            Input num
            If num == 1
                Output "Your ideal STEM profession is a general computer programmer!"
            Else
                Output "Your ideal STEM profession is a general computer program debugger!"
            End
        End
    Else
        Output "Software resources or other applications?"
        Output "Press 1 for software, press 2 for other."
        Input num
        If num == 1
```

```
        Output "Write code for software, or debug software?"
        Output "Press 1 for writing, press 2 for debugging"
        Input num
        If num == 1
           Output "Your ideal STEM aligned profession is a software engineer!"
        Else
           Output "Your ideal STEM aligned profession is a computer programmer!"
        End
     Else
        Output "Retail or Education?"
        Output "Press 1 for retail, press 2 for education."
        Input num
        If num == 1
           Output "Teach or oversee?"
           Output "Press 1 for teaching, press 2 for overseeing."
           Input num
           If num == 1
              Output "Your ideal STEM aligned profession is a computer lab assistant!"
           Else
              Output "Your ideal STEM aligned profession is a computer science teacher!"
           End
        Else
           Output "Face of the business or THE business?"
           Output "Press 1 for the face of the business, press two for the business itself."
           Input num
           If num == 1
              Output "Your ideal STEM aligned profession is a website developer!"
           Else
              Output "Your ideal STEM aligned profession is a data analyst!"
           End
        End
     End
   End
End

Function eng
End

Function envis
End

Function math
End

Function phy
End

Function rbot
End
```