

PeriodT

Because We Care!

A Solution by Team Code Slayers

This is a menstrual tracking application designed to help women track their menstrual cycle, predict the next period, and monitor symptoms related to the menstrual cycle. The main focus of this system is on the girls of age 12-19, the beginners who are really unaware of the process, the symptoms and the things that they are going through.

Features

- Easy tracking of menstrual cycles
- Machine Learning model for prediction of next period date
- Symptom tracking
- Option to add custom notes
- Support for multiple users
- Write about the system
- Anonymous note taking
- Chatbot for easy suggestions and conversations.

Technologies Used

- VS Code as the IDE
- Programming Language: Python
- Different modules of Python like matplotlib,
- Module re, to build a chatbot
- An algorithm of machine Learning for prediction of the date for the next month
- web browser module for redirecting to the a website that the user chooses
- Data structure for static databases and other operations

Data Structures Used

Dictionary: The `responses` dictionary is used to store a collection of regular expressions as keys and their corresponding responses as values. In Python, a dictionary is a built-in data structure that allows you to store key-value pairs. In this case, the keys are regular expressions, and the values are the responses that the chatbot will give when the user's input matches one of these regular expressions. Dictionary of Dictionaries that are used in this system to store the products and the corresponding rating lists.

Dictionaries contribute mainly to our project making it the most used and most variably used data structure.

Regular expression: A regular expression is a pattern that describes a set of strings. In this case, the regular expressions in the `responses` dictionary are used to match the user's input to a particular response. Regular expressions can be created using the `re` module in Python, which provides functions for searching and manipulating strings using regular expressions.

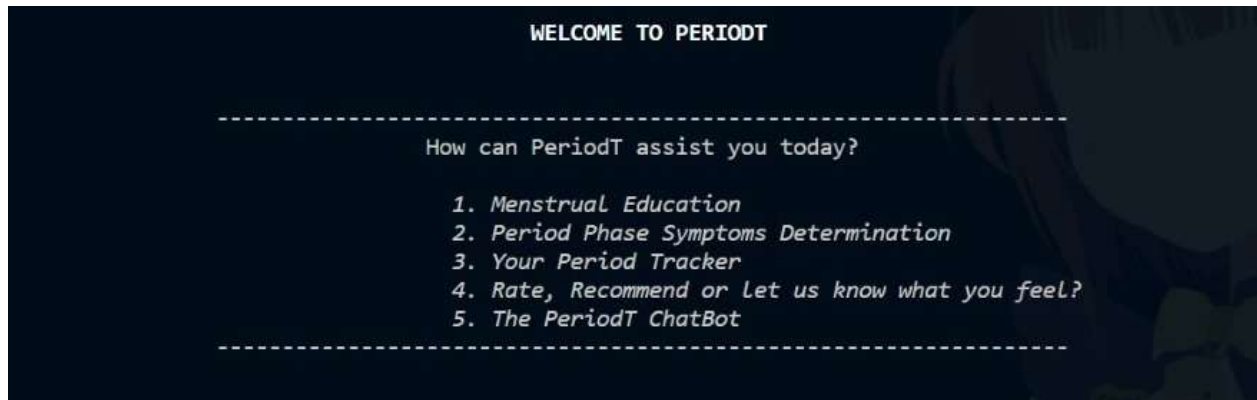
Tuple: When iterating through the `responses` dictionary in the `chatbot` function, a tuple of two values (the pattern and response) is returned by the `items()` method. A tuple is an ordered collection of values, similar to a list. However, tuples are immutable, meaning that their values cannot be changed after they are created.

Lambda function: In the `re.sub` method used in the `chatbot` function, a lambda function is used to replace any captured groups in the response string with their corresponding values from the regular expression match. A lambda function is a small, anonymous function that can be defined inline with other code, typically for one-time use.

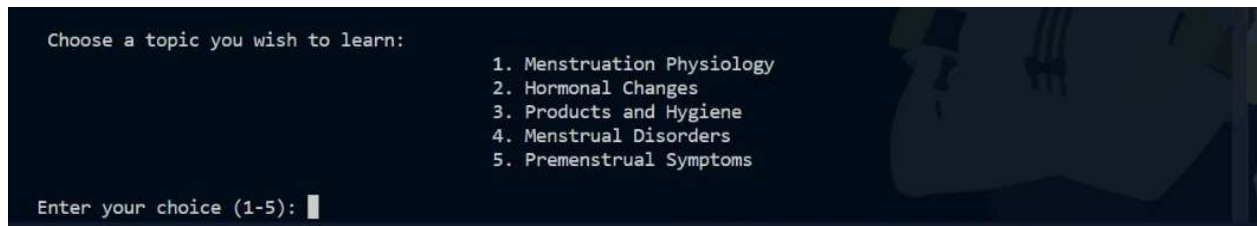
List: List of lists are used here to store the comments, suggestions and the views of customers regarding the system. Lists are important data structures that perform operations of a database here.

A tour through **PeriodT**

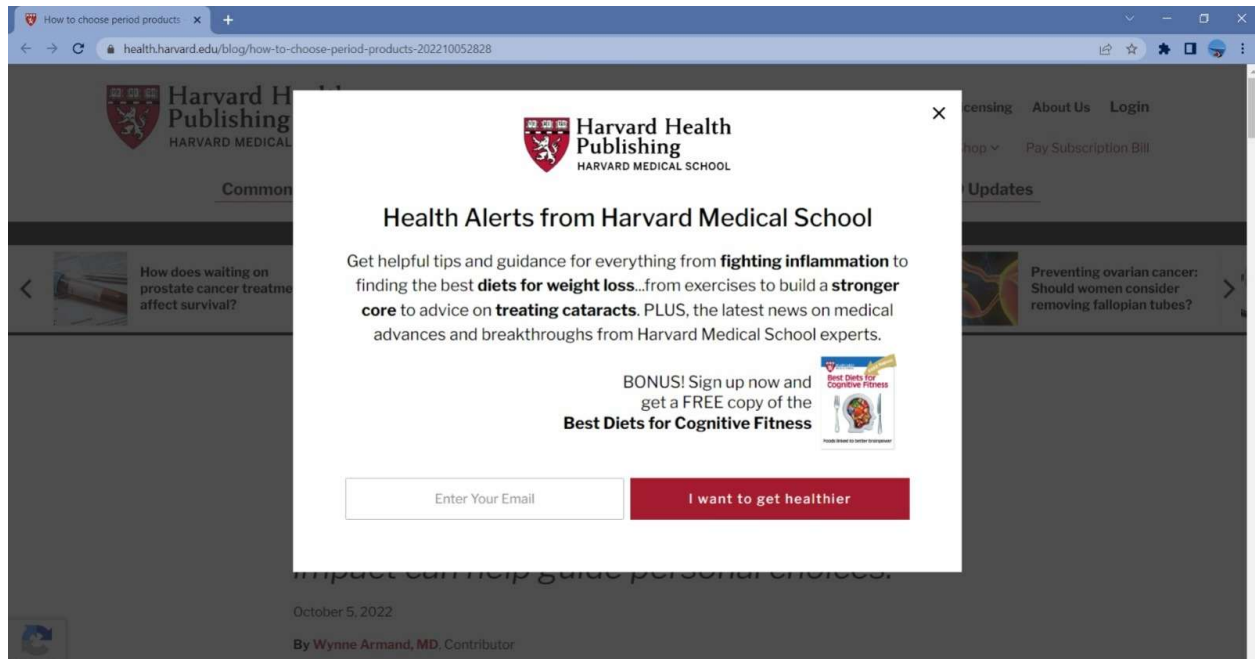
Main menu:



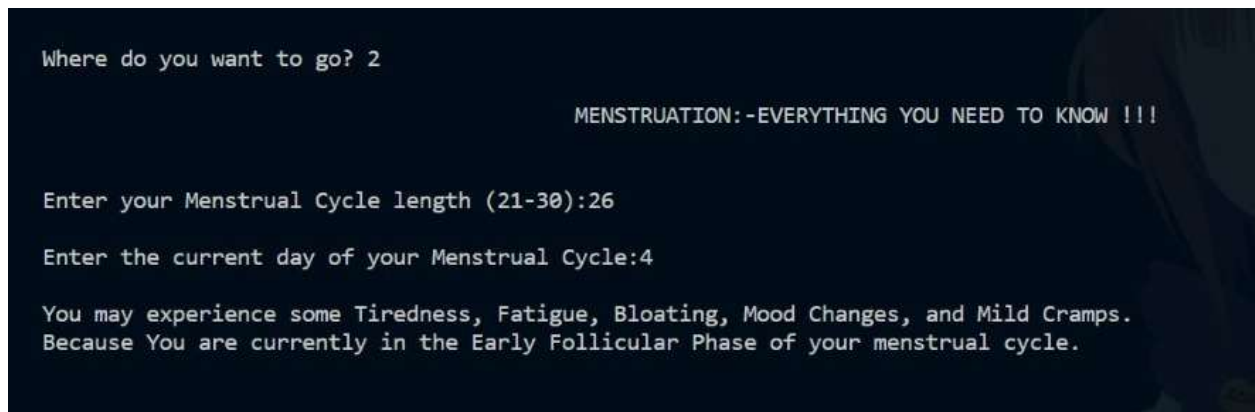
Option 1:



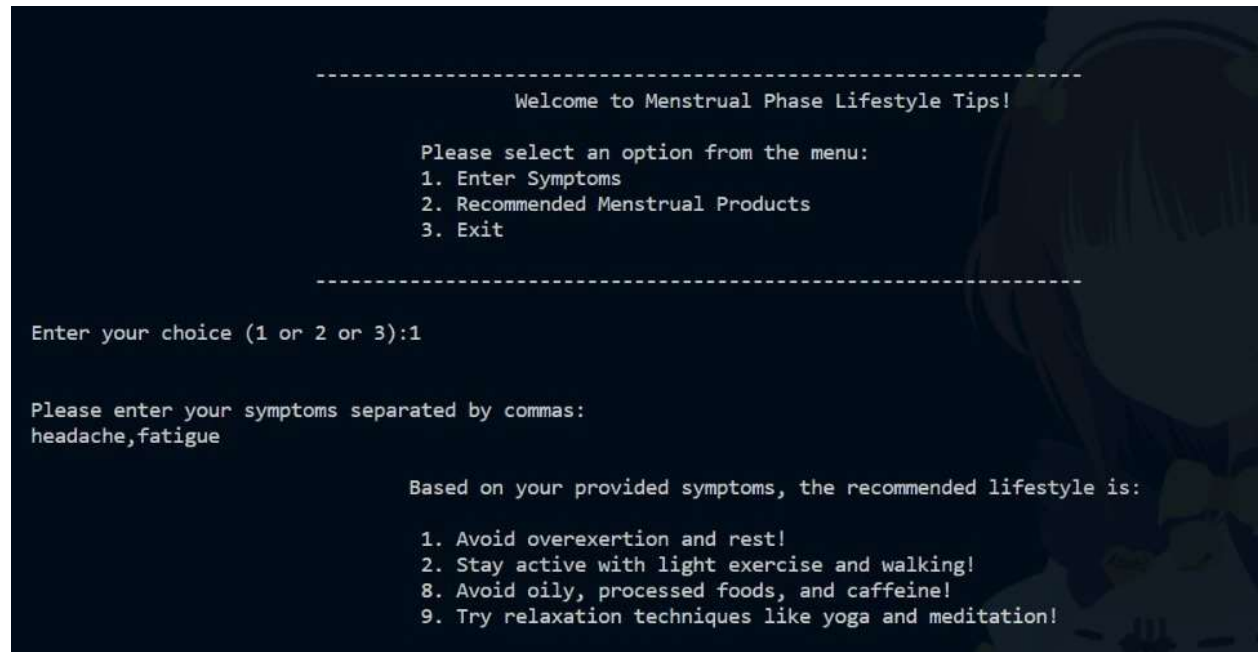
And then redirects to a page of the option in front of it.



Option 2:



Suboption 1 of Submenu 1:



Suboption 2 of SUBmenu 1:

```
Run Terminal Help Docker Desktop New Window Visual Studio Code
PROBLEMS 33 DEBUG CONSOLE OUTPUT TERMINAL SQL CONSOLE

Welcome to Menstrual Phase Lifestyle Tips!

Please select an option from the menu:
1. Enter Symptoms
2. Recommended Menstrual Products
3. Exit

-----

Enter your choice (1 or 2 or 3):2
[
  {
    "Name": "Pad",
    "Absorbency": "High",
    "Size": "Large",
    "Price": 5.99
  },
  {
    "Name": "Tampon",
    "Absorbency": "Super",
    "Size": "Large",
    "Price": 6.99
  },
  {
    "Name": "Menstrual Cup",
    "Absorbency": "High",
    "Size": "Large",
    "Price": 19.99
  },
  {
    "Name": "Menstrual discs",
    "Absorbency": "High",
    "Size": "Regular",
    "Price": 29.99
  }
]
```

Suboption 3 of submenu 1:

Exit.

Option 3:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

Enter the start date of your menstrual cycle (YYYY-MM-DD), or 'q' to quit : 2023-09-09

Enter your cycle length : 28

Your next period can be expected on : 27 th of the next month

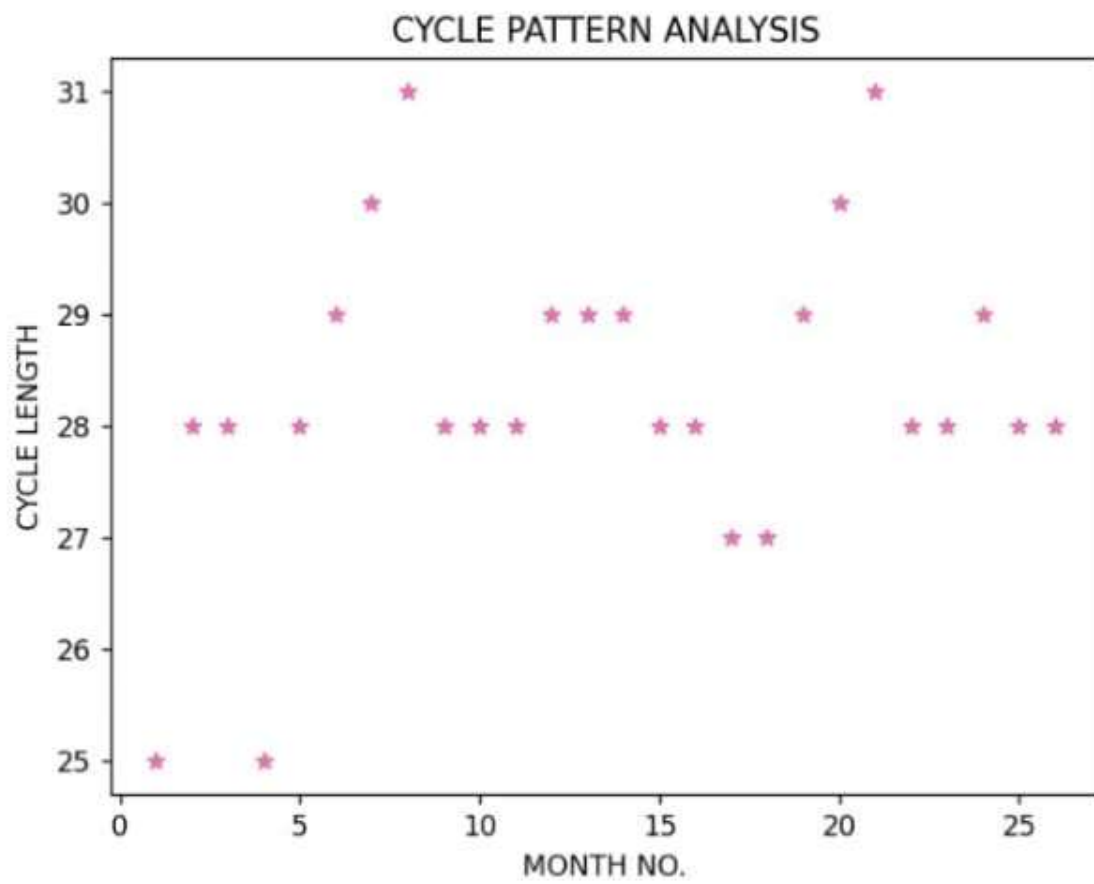
Calendar for September 2023:
      1  2
  3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30

The following calendar will help you know your next month menstrual cycle date!!

Calendar for October 2023:
  1  2  3  4  5  6  7
  8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
```

This Machine Learning model is deployed to observe the cycle length of your period and there-hence consult if any abnormalities

Figure 1



Option 4:

```
WELCOME TO RATING SYSTEM

Let me drive you through the MENU :)

Press:
1. To View the Products that you can Rate
2. Actually rate a product!
3. Contribute to the website by writing to us

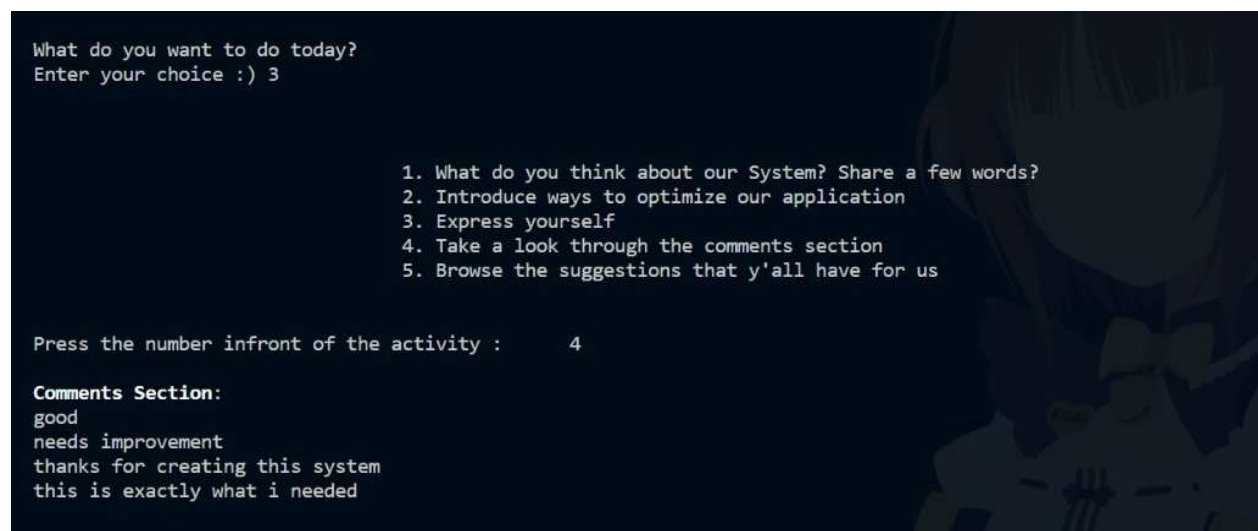
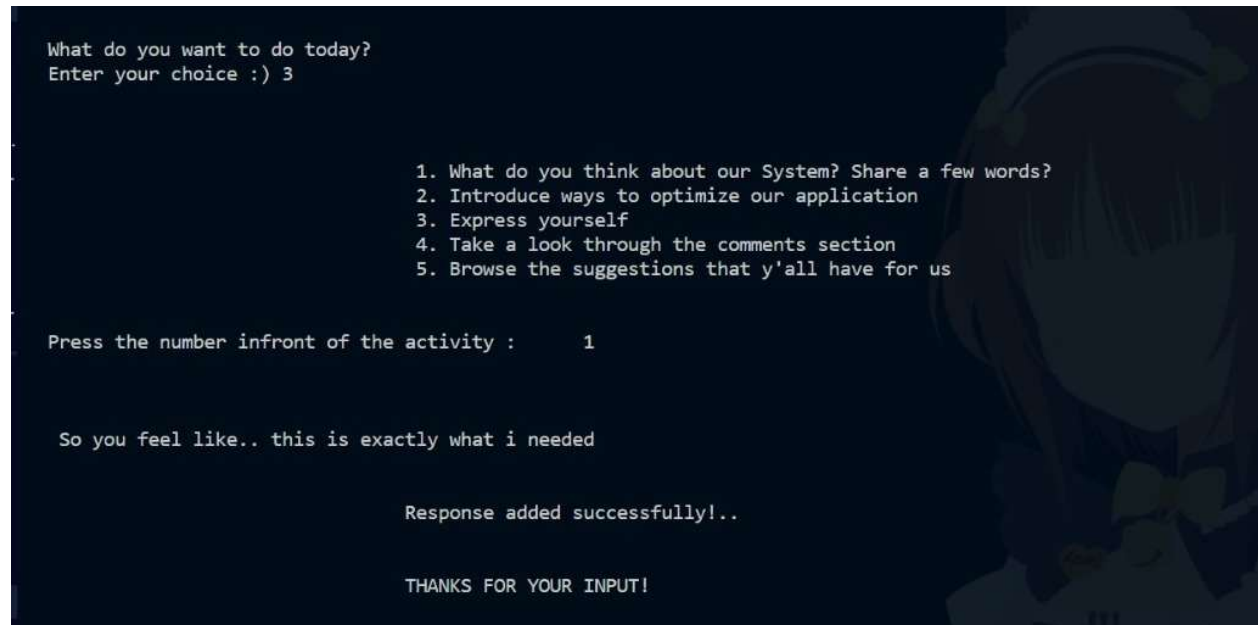
What do you want to do today?
Enter your choice :) 1

-----
1 ] Whisper Ultra Clean Menstrual Sanitary Pads
    Average Rating : 3.6
2 ] Stayfree All Night XL Dry Max Cover Sanitary Napkins
    Average Rating : 3.75
3 ] Sofy Antibacteria Extra Long Pads
    Average Rating : 3.17
4 ] Vwash Wow Ultra Size Sanitary Pads
    Average Rating : 2.57
5 ] Whisper Ultra Soft Extra Large Sanitary Pads
    Average Rating : 2.4
-----
```

```
Enter the number infront of the product that you want to rate : 4

What do you want to rate the product out of 5? 4.4
1 . Whisper Ultra Clean Menstrual Sanitary Pads
    Average Rating : 3.63
2 . Stayfree All Night XL Dry Max Cover Sanitary Napkins
    Average Rating : 3.95
3 . Sofy Antibacteria Extra Long Pads
    Average Rating : 3.21
4 . Vwash Wow Ultra Size Sanitary Pads
    Average Rating : 2.92
5 . Whisper Ultra Soft Extra Large Sanitary Pads
    Average Rating : 2.57

Rating added successfully!
```



And many other options..

Option5:

Picture 1:

```

I am PeriodT and how can i help you today?
-----
You: hi
PeriodT: Hi there! How can I help you today?
You: menstrual cycle
PeriodT: The menstrual cycle is the regular natural change that occurs in the female reproductive system that makes pregnancy possible.
You: how long
PeriodT: The average menstrual cycle is 28 days long, but can range from 21 to 35 days in length.
You: hygiene
PeriodT: Sounds about right.
You: how to maintain menstrual hygiene
PeriodT:
Sure, here are five lines on menstrual hygiene:

1. Menstrual hygiene refers to the practices and behaviors that help maintain cleanliness and prevent infection during menstruation.
2. Good menstrual hygiene practices include changing sanitary products regularly, washing the genital area with water and mild soap, and avoiding the use of scented products.
3. It's important to wash your hands before and after changing sanitary products to prevent the spread of germs.
4. Sharing of menstrual products or personal items such as underwear should be avoided to prevent the spread of infection.
5. If you experience any unusual symptoms or discomfort during menstruation, it is important to talk to a healthcare provider to rule out any potential infections or other health concerns.

You: how is the flow
PeriodT: The amount of blood you lose during your menstrual cycle can vary, but the average is between 30 and 40 milliliters. However, it's normal to experience heavier or lighter bleeding from month to month. If you're experiencing heavy bleeding or passing clots, talk to your healthcare provider to rule out any underlying conditions.
You: what is the frequency
PeriodT: The frequency of your menstrual cycle can vary, but the average is once every 28 days. However, anywhere from 21 to 35 days is considered normal. If you're experiencing irregular

```

Picture 2:

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Welcome to the PeriodT chatBot!

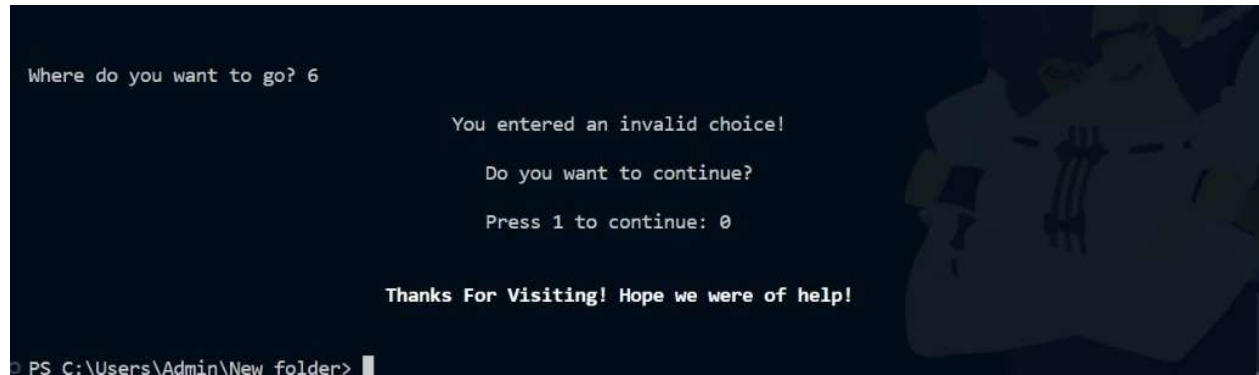
I am PeriodT and how can i help you today?
-----
You: hi
PeriodT: Hi there! How can I help you today?
You: menstrual cycle
PeriodT: The menstrual cycle is the regular natural change that occurs in the female reproductive system that makes pregnancy possible.
You: how long
PeriodT: The average menstrual cycle is 28 days long, but can range from 21 to 35 days in length.
You: how to cure bad period cramps
PeriodT: There are several things you can try to relieve menstrual cramps, including taking over-the-counter pain medication, using a heating pad or hot water bottle, and practicing relaxation techniques such as deep breathing or yoga.
You: symptoms
PeriodT: Some common symptoms of menstruation include bloating, cramping, headaches, fatigue, mood swings, and breast tenderness. It's normal to experience some discomfort during your menstrual cycle, but if you're experiencing severe or unusual symptoms, it's a good idea to talk to your healthcare provider to rule out any underlying conditions.
You: advice
PeriodT: If you're experiencing menstrual cramps, try using a heating pad or taking a warm bath to help relieve the pain. Drinking chamomile tea or taking over-the-counter pain medication can also be helpful. If your cramps are severe or interfering with your daily life, consider talking to your healthcare provider about other treatment options.
You: thanks
PeriodT: My Pleasure
You: goodbye
-----

Do you want to continue?

Press 1 to continue: 1

```

Termination

A screenshot of a Windows command prompt window. The background is dark blue with a faint, stylized map of the world. The text is white. The prompt is 'PS C:\Users\Admin\New folder>'. The user has entered '6' in response to 'Where do you want to go?'. The program responds with 'You entered an invalid choice!', 'Do you want to continue?', and 'Press 1 to continue: 0'. Finally, it displays 'Thanks For Visiting! Hope we were of help!' before returning to the prompt.

```
Where do you want to go? 6

You entered an invalid choice!

Do you want to continue?

Press 1 to continue: 0

Thanks For Visiting! Hope we were of help!

PS C:\Users\Admin\New folder>
```

Scope of Improvement

- Content and Quality wise the system is really something that a teenager can rely on.
- This model can be deployed into an application that would have an interesting UI and can catch attention.
- This system right now has a static database and has a potential to work with databases and interact with it using a live website.
- Content wise we have provided an excellent system I believe

