

STORY GENERATOR

PROJECT REPORT

by

SHUBHAM SHARMA

RK19PDB06 B06

MASWOOD AHMAD

RK19PDB70 B70

ANIKET

RK19PDB53



Department of Intelligent Systems

School of Computer Science Engineering

Lovely Professional University, Jalandhar

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Student Declaration

This is to declare that this report has been written by us. No part of the report is copied from other sources. All information included from other sources have been duly acknowledged. We aver that if any part of the report is found to be copied, we shall take full responsibility for it.

Shubham Sharma B06

Maswood Ahmad B70

Aniket B53

Place: Jalandhar

Date: 28th October, 2020

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BONAFIDE CERTIFICATE

Certified that this project report “STORY GENERATOR” is the bonafide work of “SHUBHAM SHARMA, MASWOOD AHMAD, and ANIKET” who carried out the project work under my supervision.

Ashish Shrivastava

Assistant Professor

ID - 25703

School of Computer and Engineering

1. INTRODUCTION

Story telling is an important component in the world of games. In most genres, a game's storyline is what captures the attention of gamers and it becomes the selling point of the game. Story telling can also play a huge role in a child's growth where it can be used as a form of education for the child. Making use of technologies, story generation can be made automated. With the advancement of technologies and artificial intelligence, there are more and more interactivebased and automatic story generators being developed. There is already usage of automated tools for plot development in the entertainment industry. Besides that, dynamic story generation can be used as a form interactive learning in classroom teachings or online-based educational sites. Children can engage and interact with the program in order to generate stories dynamically. This may help to attract a child's interest and promote creativity.

1.1.MOTIVATION AND BACKGROUND

There are various types of existing story generators, each can be categorized based on the story generation algorithm it uses. Some of the algorithms include the case-based algorithm, rolebase algorithm and data-driven algorithm. Each of these algorithms has its own benefits and limitations.

User interaction is important in maintaining a user's interest towards the story, especially in games for children. For example, the data-driven story generator generates sentences based on highest score between words' correlation. However, the generator does not have fluency and coherence between sentences. This makes the story progression feels inconsistent and does not have fluency. The user does not have control or influence over the story progression, as the story generator does not take in user input during the story generation process. This is also the case for other story generators such as case-based story generator or role-based story generator. The **motivation** behind this project is to come up with a story generation approach which allows more user interaction by keeping in mind the limitations of other techniques.

1.2. OBJECTIVE AND GOAL

This is the main objective of this project. In this project an approach which will allow more user interactions will be developed. This approach's aim is to promote more user interaction during the story generation process. In this user-driven story generation approach,

- Firstly users are given the choices to input the type of story that they are willing to generate, the available options are: the plot story, the Imagination story, and the Pokemon Battle story.

- All the stories have random templates which will print the new story every time the user enters the new choice.
- Based upon the entered choice the user will have to provide several simple input parameters to the story generator during initialization stage.
- Based on these inputs, the story generator will determine the story's template, characters and then generate the story.

The **goal** of this research is to develop a user-driven story generation approach which allows more user interaction. The final output is a story generator application implements the user-driven approach.

2. PROJECT DESCRIPTION

This section discusses about the development stages of the story generator and the details of the main components. Figure 1 shows the process flow of the project along with the modules.

Modules

The story generator project mainly consists of two main components/ modules:

- Story Planner,
- Story Renderer

2.1.Module 1: Story planner

Story planner makes use of information from the user input to determine the next sequence of questions as well as story progression. A fixed type story is used, with varying characters and actions depending on the user's input.

Choice input: The story planner first asks for the particular type of story to be generated which includes:

1. Plot story
2. Imagination
3. Pokemon battle story
4. Exit

Based on the entered choice the action is performed like, if the user enters the choice 1, 2, or 3: corresponding to that further actions are performed for story generation. However, if the user enters the choice 4 he/she will be exited from the story generator. In case the user enters anything apart from the choices, he will saw a message saying "*please enter a valid choice!*". Based on the entered story choices (1, 2, or 3) the questions are asked from the user regarding the sentence rendering process for story generation process.

For example: the questions asked for the Imagination story are:

- Q1: enter the name of the enemy.
- Q2: enter the name of the father.
- Q3: enter the adjective for the enemy.

The responses to these questions are stored in the *enemy*, *father*, and *enemyadj* variables respectively which are further used in story generation process.

2.2.Module 2: Story Renderer/Generator

The next stage is, where the story generator prompts questions for the user based on his/her given story type input and then the given user input is used to determine the story progression. The sentence renderer is responsible for constructing sentences for the story generator. The variables change accordingly depending on the user-input. Some examples are:

- *enemy*: replaces the enemy of the self in *imagination* type story.
- *father*: replaces the father of self in *imagination* type story.
- *enemyadj*: replaces the behavior of enemy during sentence rendering.

Some of the sentences variables defined are:

- *prob2*: “all of a sudden a psychopathic” + *enemy* + “grinned at me showing all the razor sharp teeth. Suddenly it started to claw at my face. From the loss of blood, I collapsed onto the tough ground.”
- *sol3*: “I forced my drowsy eyes open to the sounds of a” + *enemyadj* + “ “ + *enemy* + “licking my face.”

After the sentence rendering process, the story rendering is done using the predefined templates and randomization process. The rendered sentences are printed randomly during story generation process. The “random” module of python is used to select the random sentences from a list of sentence variables defined.

For example: `random.choice([intro1, intro2, intro3]) + random.choice([sol1, sol2, sol3]).`

Replacing sentence variables with its random choices is part of the story generator’s randomization function to keep the generated story different each time.

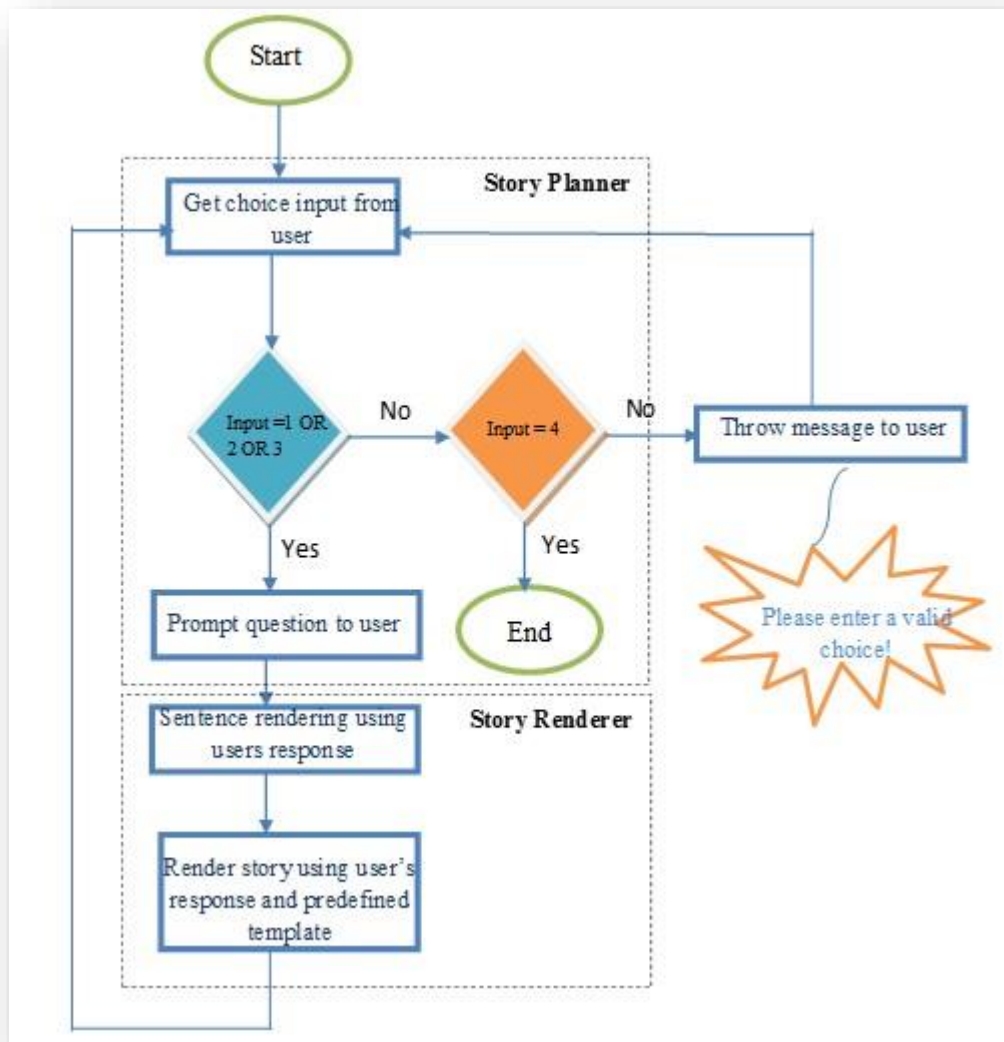


Figure 1: Modules and process flow of the project

3. STUDENTS' ROLES AND RESPONSIBILITIES

In this section, the project tasks required in order to complete this project are described along with the name of the students who have completed the tasks.

Analyzing available story generators	Shubham Sharma (RK19PDB06)
Analyzing available resources	
Reading sources to prepare templates	
Designing the method	Aniket(RK19PDB53)
Coding and implementation	
Testing the code	
Corrections in code (if they were)	Maswood Ahmad (RK19PDB70)
Project report writting	

4. IMPLEMENTATION

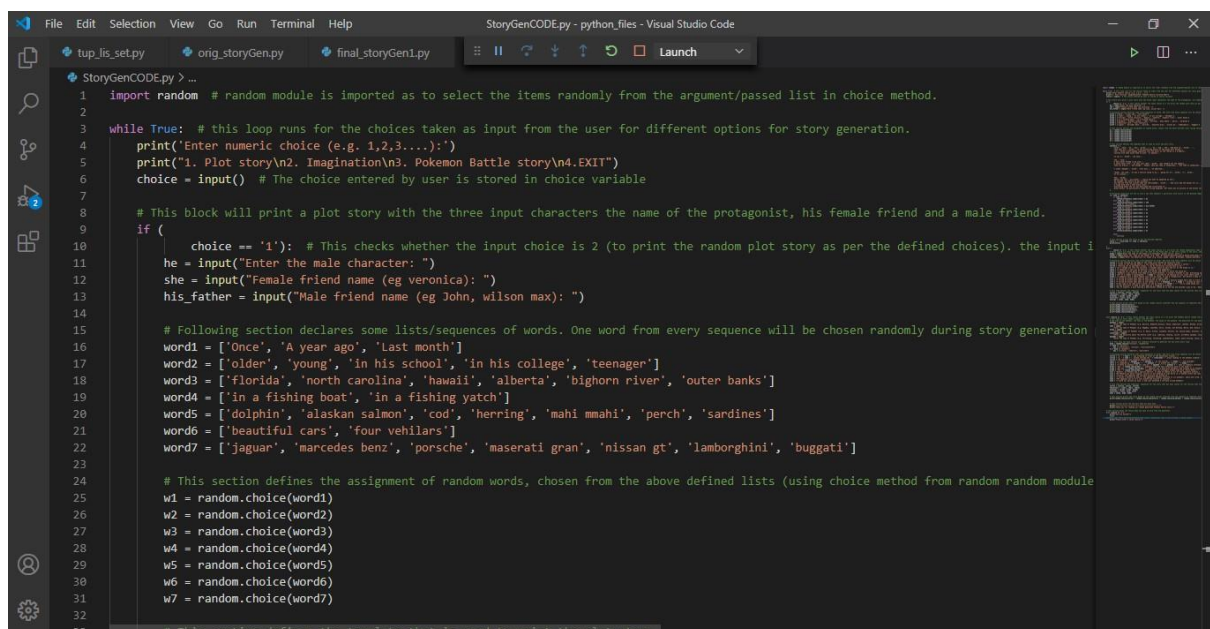
The implementation of the project is done using *python* using *Visual Studio Code* editor.

First of all the random module is imported as it carries the supporting code to randomly select the choices from a given list. The user is given a list of options to select the choice of story type. This process is continued until the choice pressed by the user is “Exit” (i.e. 4).

As the user selects the type of the story, some of the questions related to the story type selected by him/her are prompted.

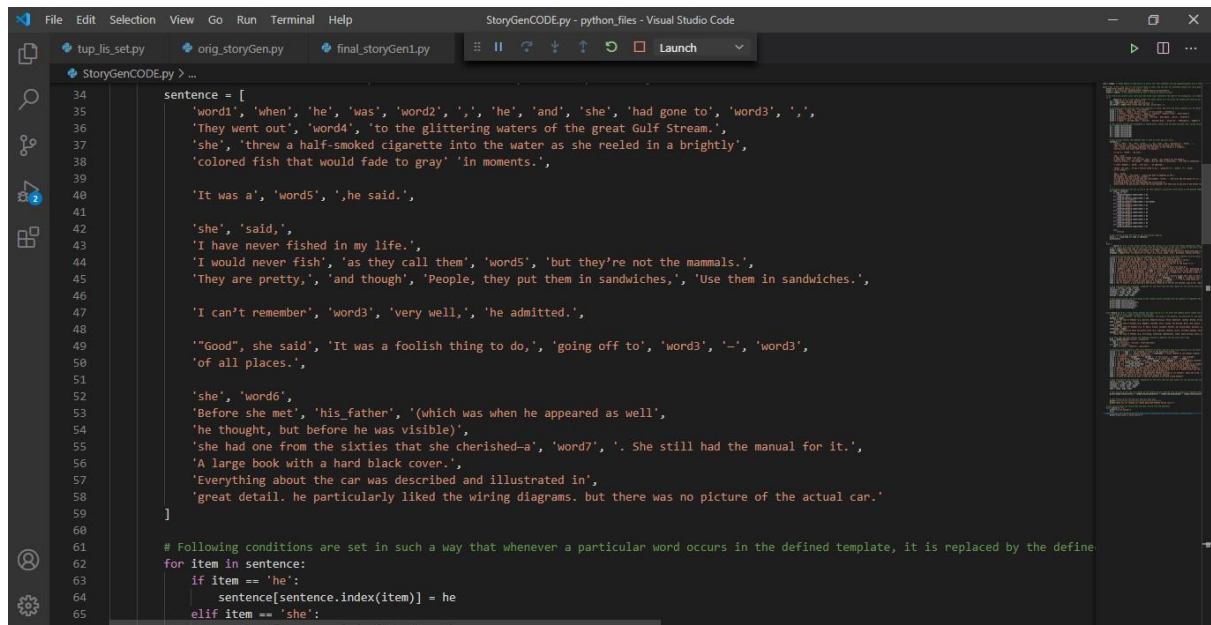
Story type 1 code:

When the user selects the story type - 1, he/she will be asked for the questions related to the plot story as defined by the programmer. The code for story 1 is shown in following figures. Three variable “he”, “she”, and “his_father” are taken to take the input from the users. Some of the lists are also prepared to randomize the story generated every time. Thus every time the user press choice for the same type of story, the variables- *word1*, *word2*, *word3*, *word4*, *word5*, *word6*, and *word7* are used by random choice method to randomly select the words. *W1*, *w2*, *w3*, *w4*, *w5*, *w6*, and *w7* are used to store the results obtained from the random choice method.



```
1 import random # random module is imported as to select the items randomly from the argument/passed list in choice method.
2
3 while True: # this loop runs for the choices taken as input from the user for different options for story generation.
4     print('Enter numeric choice (e.g. 1,2,3,...):')
5     print('1. Plot story\n2. Imagination\n3. Pokemon Battle story\n4.EXIT')
6     choice = input() # The choice entered by user is stored in choice variable
7
8     # This block will print a plot story with the three input characters the name of the protagonist, his female friend and a male friend.
9     if (
10         choice == '1': # This checks whether the input choice is 2 (to print the random plot story as per the defined choices). the input i
11             he = input("Enter the male character: ")
12             she = input("Female friend name (eg veronica): ")
13             his_father = input("Male friend name (eg John, wilson max): ")
14
15             # Following section declares some lists/sequences of words. One word from every sequence will be chosen randomly during story generation
16             word1 = ['Once', 'A year ago', 'Last month']
17             word2 = ['older', 'young', 'in his school', 'in his college', 'teenager']
18             word3 = ['florida', 'north carolina', 'hawaii', 'alberta', 'bighorn river', 'outer banks']
19             word4 = ['in a fishing boat', 'in a fishing yatch']
20             word5 = ['dolphin', 'alaskan salmon', 'cod', 'herring', 'mahi mmahi', 'perch', 'sardines']
21             word6 = ['beautiful cars', 'four vehlars']
22             word7 = ['jaguar', 'mercedes benz', 'porsche', 'maserati gran', 'nissan gt', 'lamborghini', 'buggati']
23
24             # This section defines the assignment of random words, chosen from the above defined lists (using choice method from random module
25             w1 = random.choice(word1)
26             w2 = random.choice(word2)
27             w3 = random.choice(word3)
28             w4 = random.choice(word4)
29             w5 = random.choice(word5)
30             w6 = random.choice(word6)
31             w7 = random.choice(word7)
32
33             # This section defines the template that is used to print the plot story
```

The following figure shows the template for the story type 1 (pplot story). The variables in the template will be further replaced by the defined words and user inputs.

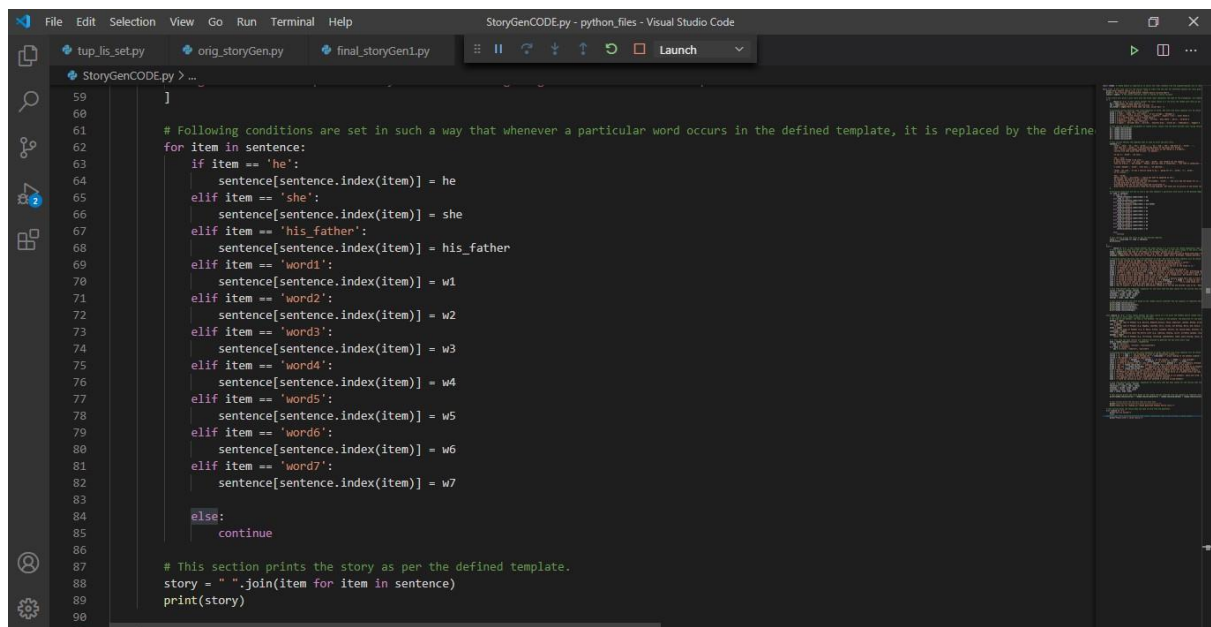


```

34 sentence = [
35     'word1', 'when', 'he', 'was', 'word2', ',', 'he', 'and', 'she', 'had gone to', 'word3', ',',
36     'They went out', 'word4', 'to the glittering waters of the great Gulf Stream.',
37     'she', 'threw a half-smoked cigarette into the water as she reeled in a brightly',
38     'colored fish that would fade to gray' 'in moments.',
39
40     'It was a', 'word5', ',he said.',
41
42     'she', 'said,',
43     'I have never fished in my life.',
44     'I would never fish', 'as they call them', 'word5', 'but they're not the mammals.',
45     'They are pretty,', 'and though', 'People, they put them in sandwiches,', 'Use them in sandwiches.',
46
47     'I can't remember', 'word3', 'very well,', 'he admitted.',
48
49     '"Good", she said', 'It was a foolish thing to do,', 'going off to', 'word3', '-', 'word3',
50     'of all places.',
51
52     'she', 'word6',
53     'Before she met', 'his_father', '(which was when he appeared as well',
54     'he thought, but before he was visible)',
55     'she had one from the sixties that she cherished-a', 'word7', '. She still had the manual for it.',
56     'A large book with a hard black cover.',
57     'Everything about the car was described and illustrated in',
58     'great detail. he particularly liked the wiring diagrams. but there was no picture of the actual car.'
59 ]
60
61 # Following conditions are set in such a way that whenever a particular word occurs in the defined template, it is replaced by the define
62 for item in sentence:
63     if item == 'he':
64         sentence[sentence.index(item)] = he
65     elif item == 'she':
66         sentence[sentence.index(item)] = she
67     elif item == 'his_father':
68         sentence[sentence.index(item)] = his_father
69     elif item == 'word1':
70         sentence[sentence.index(item)] = w1
71     elif item == 'word2':
72         sentence[sentence.index(item)] = w2
73     elif item == 'word3':
74         sentence[sentence.index(item)] = w3
75     elif item == 'word4':
76         sentence[sentence.index(item)] = w4
77     elif item == 'word5':
78         sentence[sentence.index(item)] = w5
79     elif item == 'word6':
80         sentence[sentence.index(item)] = w6
81     elif item == 'word7':
82         sentence[sentence.index(item)] = w7
83
84     else:
85         continue
86
87 # This section prints the story as per the defined template.
88 story = ""
89 for item in sentence:
90     story += item
91
92 print(story)

```

The input words and the predefined words (selected using randomization method) are used to be replaced in the story template during story generation process.



```

59 ]
60
61 # Following conditions are set in such a way that whenever a particular word occurs in the defined template, it is replaced by the define
62 for item in sentence:
63     if item == 'he':
64         sentence[sentence.index(item)] = he
65     elif item == 'she':
66         sentence[sentence.index(item)] = she
67     elif item == 'his_father':
68         sentence[sentence.index(item)] = his_father
69     elif item == 'word1':
70         sentence[sentence.index(item)] = w1
71     elif item == 'word2':
72         sentence[sentence.index(item)] = w2
73     elif item == 'word3':
74         sentence[sentence.index(item)] = w3
75     elif item == 'word4':
76         sentence[sentence.index(item)] = w4
77     elif item == 'word5':
78         sentence[sentence.index(item)] = w5
79     elif item == 'word6':
80         sentence[sentence.index(item)] = w6
81     elif item == 'word7':
82         sentence[sentence.index(item)] = w7
83
84     else:
85         continue
86
87 # This section prints the story as per the defined template.
88 story = ""
89 for item in sentence:
90     story += item
91
92 print(story)

```

Output:

As the user selects the type of the story as 1. (Plot story), some of the questions related to the story type selected by him/her are prompted. Which can be shown in the following figure. Once the users gives the answer to the questions as per his/her requirements, the generated story is reflected on the screen.

```

Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
1
Enter the male character: Shubham
Female friend name (eg veronica): Nancy
Male friend name (eg John, Wilson max): WilMax
Once when Shubham was young , Shubham and Nancy had gone to florida , They went out in a fishing yacht to the glittering waters of the great Gulf Stream. Nancy threw a half-smoked ci
garette into the water as she reeled in a brightly colored fish that would fade to gray in moments. It was a dolphin ,he said. Nancy said, I have never fished in my life. I would neve
r fish as they call them dolphin but they're not the mammals. They are pretty, and though People, they put them in sandwiches, Use them in sandwiches. I can't remember florida very w
ell, he admitted. "Good", she said It was a foolish thing to do, going off to florida – florida of all places. Nancy four vehilars Before she met WilMax (which was when he appeared a
s well he thought, but before he was visible) she had one from the sixties that she cherished-a nissan gt . She still had the manual for it. A large book with a hard black cover. Eve
rything about the car was described and illustrated in great detail. he particularly liked the wiring diagrams. but there was no picture of the actual car.
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
1
Enter the male character: John
Female friend name (eg veronica): Smayra
Male friend name (eg John, Wilson max): Harry
Once when John was older , John and Smayra had gone to florida , They went out in a fishing yacht to the glittering waters of the great Gulf Stream. Smayra threw a half-smoked cigare
tte into the water as she reeled in a brightly colored fish that would fade to gray in moments. It was a sardines ,he said. Smayra said, I have never fished in my life. I would never
fish as they call them sardines but they're not the mammals. They are pretty, and though People, they put them in sandwiches, Use them in sandwiches. I can't remember florida very we
ll, he admitted. "Good", she said It was a foolish thing to do, going off to florida – florida of all places. Smayra beautiful cars Before she met Harry (which was when he appeared a
s well he thought, but before he was visible) she had one from the sixties that she cherished-a maserati gran . She still had the manual for it. A large book with a hard black cover.
Everything about the car was described and illustrated in great detail. he particularly liked the wiring diagrams. but there was no picture of the actual car.
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT

```

Story type 2 code

When the user selects the story type – 2 (Imagination), he/she will be asked for the questions related to the plot story as defined by the programmer. The code for story 1 is shown in following figures. Three variable *enemy*, *father*, *enemyadj* are taken to take the input from the users. Some of the lists are also prepared to randomize the story generated every time.

The input words and the predefined words (selected using randomization method) are used to be replaced in the story template during story generation process.

```

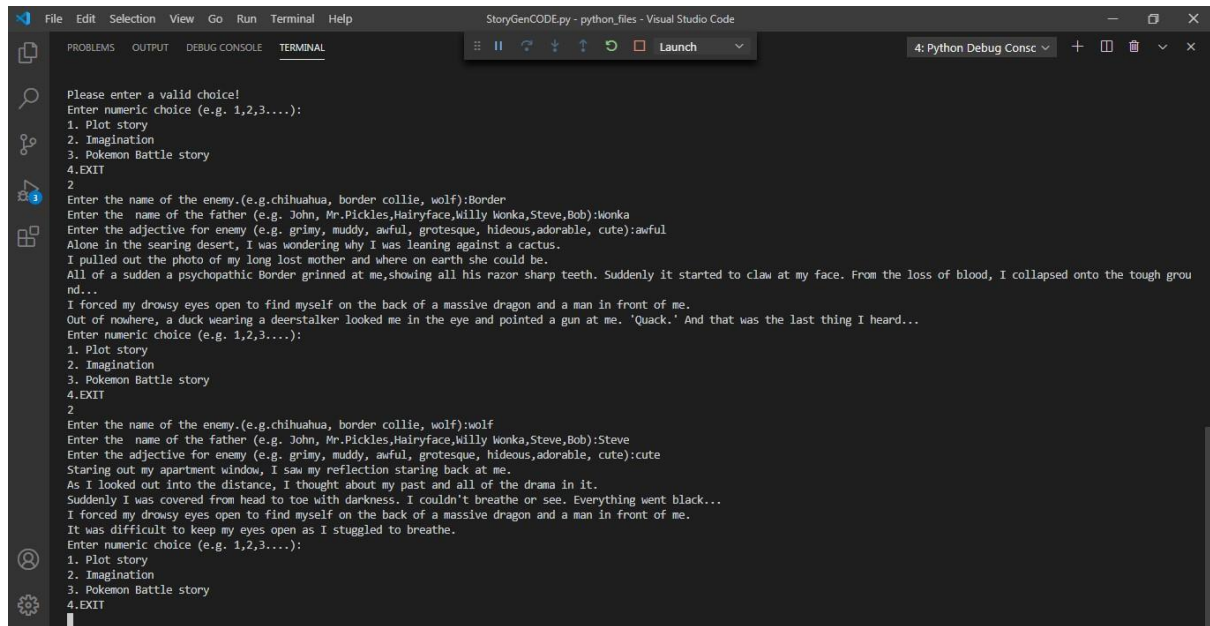
StoryGenCODE.py > ...
92 elif (choice == '2'): # This checks whether the input choice is 1 (to print the random Imagination type story as per the defined choices).
93 # Three inputs are taken from the user: the name of the enemy that is the self's enemy in the story, the name of self's father, and the a
94 enemy = input("Enter the name of the enemy (e.g.chihuahua, border collie, wolf):")
95 father = input("Enter the name of the father (e.g. John, Mr.Pickles,Hairyface,Willy Wonka,Steve,Bob):")
96 enemyadj = input("Enter the adjective for enemy (e.g. grimy, muddy, awful, grotesque, hideous,adorable, cute):")
97 # Following section declares some lists/sequences of words. One word from every sequence will be chosen randomly during story generation
98 intro1 = "I was sitting on the edge of the rocky cliff beside my favourite tree."
99 intro2 = "Alone in the searing desert, I was wondering why I was leaning against a cactus."
100 intro3 = "Staring out my apartment window, I saw my reflection staring back at me."
101 char1 = "As I looked out into the distance, I thought about my past and all of the drama in it."
102 char2 = "I wondered if this was my destiny- trying to find happiness."
103 char3 = "I pulled out the photo of my long lost mother and where on earth she could be."
104 prob1 = "Suddenly I was covered from head to toe with darkness. I couldn't breathe or see. Everything went black..."
105 prob2 = "All of a sudden a psychopathic " + enemy + " grinned at me,showing all his razor sharp teeth. Suddenly it started to claw at my
106 prob3 = "I suddenly felt a sharp needle sink into my flesh. It was a tranquilizer. But before I knew it I started feeling really drowsy.
107 sol1 = "I forced my drowsy eyes open my eyes to see a bright light."
108 sol2 = "I forced my drowsy eyes open to find myself on the back of a massive dragon and a man in front of me."
109 sol3 = "I forced my drowsy eyes open to the sounds of a " + enemyadj + " " + enemy + " licking my face."
110 end1 = "A man came to my side with a knife. It was my father!" + father + "!" "Go to sleep young one..."
111 end2 = "It was difficult to keep my eyes open as I struggled to breathe. "
112 end3 = "Out of nowhere, a duck wearing a deerstalker looked me in the eye and pointed a gun at me. 'Quack.' And that was the last thing I
113 # This step defines the templates' sequences for the story that has been chosen for the stories that are randomly printed during each run
114 intros = [intro1, intro2, intro3]
115 characters = [char1, char2, char3]
116 problems = [prob1, prob2, prob3]
117 solutions = [sol1, sol2, sol3]
118 endings = [end1, end2, end3]
119 # This section prints the story based on the random choices selected from the sequence of templates defined in above section.
120 print(random.choice(intros)),
121 print(random.choice(characters)),
122 print(random.choice(problems)),
123 print(random.choice(solutions)),
124 print(random.choice(endings))

```

Output:

As the user selects the type of the story as 2. (Imagination), some of the questions related to the story type selected by him/her are prompted. Which can be shown in the following figure.

Once the users gives the answer to the questions as per his/her requirements, the generated story is reflected on the screen.



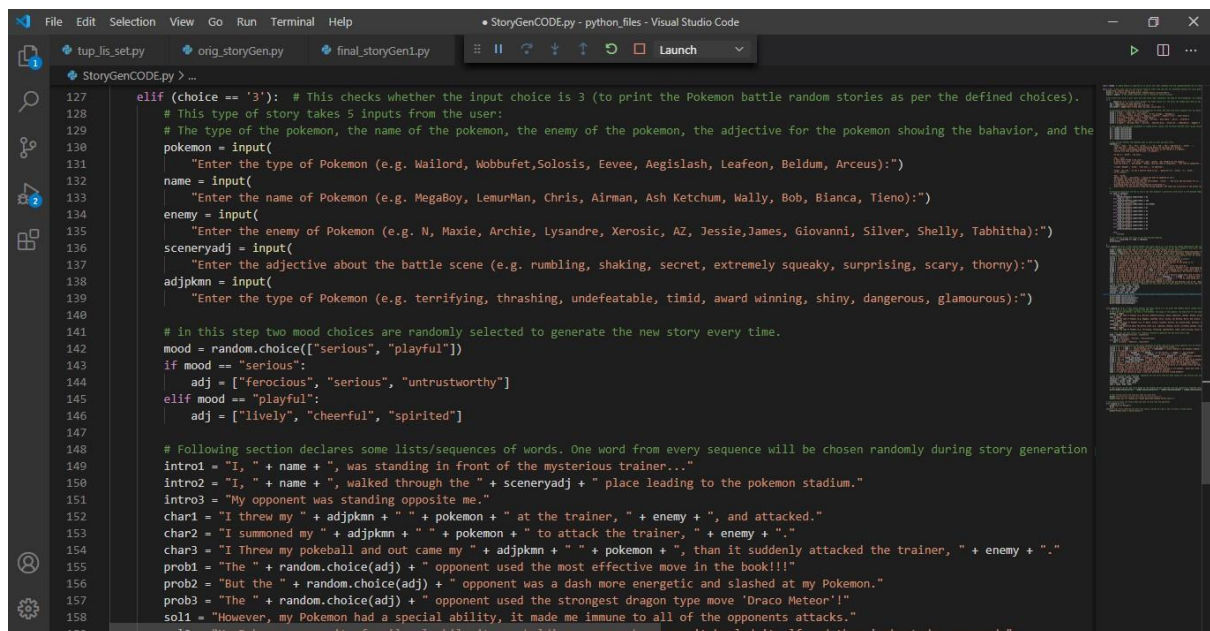
```

File Edit Selection View Go Run Terminal Help
StoryGenCODE.py - python_files - Visual Studio Code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Please enter a valid choice!
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
2
Enter the name of the enemy.(e.g.chihuahua, border collie, wolf):Border
Enter the name of the father (e.g. John, Mr.Pickles,Hairyface,killy wonka,Steve,Bob):Wonka
Enter the adjective for enemy (e.g. grimy, muddy, awful, grotesque, hideous,adorable, cute):awful
Alone in the searing desert, I was wondering why I was leaning against a cactus.
I pulled out the photo of my long lost mother and where on earth she could be.
All of a sudden a psychopathic Border grinned at me,showing all his razor sharp teeth. Suddenly it started to claw at my face. From the loss of blood, I collapsed onto the tough ground...
I forced my drowsy eyes open to find myself on the back of a massive dragon and a man in front of me.
Out of nowhere, a duck wearing a deerstalker looked me in the eye and pointed a gun at me. 'Quack.' And that was the last thing I heard...
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
2
Enter the name of the enemy.(e.g.chihuahua, border collie, wolf):wolf
Enter the name of the father (e.g. John, Mr.Pickles,Hairyface,killy wonka,Steve,Bob):Steve
Enter the adjective for enemy (e.g. grimy, muddy, awful, grotesque, hideous,adorable, cute):cute
Staring out my apartment window, I saw my reflection staring back at me.
As I looked out into the distance, I thought about my past and all of the drama in it.
Suddenly I was covered from head to toe with darkness. I couldn't breathe or see. Everything went black...
I forced my drowsy eyes open to find myself on the back of a massive dragon and a man in front of me.
It was difficult to keep my eyes open as I struggled to breathe.
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT

```

Story type 3 code

When the user selects the story type -3 (Pokemon Battle story), he/she will be asked for the questions related to the plot story as defined by the programmer. The code for story 1 is shown in following figures. Five variables: *pokemon*, *name*, *enemy*, *screenadj*, and *adjpkmn* are taken to take the input from the users. Some of the lists are also prepared to randomize the story generated every time.



```

File Edit Selection View Go Run Terminal Help
StoryGenCODE.py - python_files - Visual Studio Code
StoryGenCODE.py > ...
127 elif (choice == '3'): # This checks whether the input choice is 3 (to print the Pokemon battle random stories as per the defined choices).
128 # This type of story takes 5 inputs from the user:
129 # The type of the pokemon, the name of the pokemon, the enemy of the pokemon, the adjective for the pokemon showing the behavior, and the
130 pokemon = input(
131     "Enter the type of Pokemon (e.g. Mailord, Wobbufet,Solosis, Eevee, Aegislash, Leafeon, Beldum, Arceus):")
132 name = input(
133     "Enter the name of Pokemon (e.g. MegaBoy, LemurMan, Chris, Airman, Ash Ketchum, Wally, Bob, Bianca, Tieno):")
134 enemy = input(
135     "Enter the enemy of Pokemon (e.g. N, Maxie, Archie, Lysandre, Xerosic, AZ, Jessie,James, Giovanni, Silver, Shelly, Tabitha):")
136 sceneryadj = input(
137     "Enter the adjective about the battle scene (e.g. rumbling, shaking, secret, extremely squeaky, surprising, scary, thorny):")
138 adjpkmn = input(
139     "Enter the type of Pokemon (e.g. terrifying, thrashing, undefeatable, timid, award winning, shiny, dangerous, glamorous):")
140
141 # In this step two mood choices are randomly selected to generate the new story every time.
142 mood = random.choice(["serious", "playful"])
143 if mood == "serious":
144     adj = ["ferocious", "serious", "untrustworthy"]
145 elif mood == "playful":
146     adj = ["lively", "cheerful", "spirited"]
147
148 # Following section declares some lists/sequences of words. One word from every sequence will be chosen randomly during story generation
149 intro1 = "I, " + name + ", was standing in front of the mysterious trainer..."
150 intro2 = "I, " + name + ", walked through the " + sceneryadj + " place leading to the pokemon stadium."
151 intro3 = "My opponent was standing opposite me."
152 char1 = "I threw my " + adjpkmn + " " + pokemon + " at the trainer, " + enemy + ", and attacked."
153 char2 = "I summoned my " + adjpkmn + " " + pokemon + " to attack the trainer, " + enemy + "..."
154 char3 = "I Threw my pokeball and out came my " + adjpkmn + " " + pokemon + ", then it suddenly attacked the trainer, " + enemy + "..."
155 prob1 = "The " + random.choice(adj) + " opponent used the most effective move in the book!!!"
156 prob2 = "But the " + random.choice(adj) + " opponent was a dash more energetic and slashed at my Pokemon."
157 prob3 = "The " + random.choice(adj) + " opponent used the strongest dragon type move 'Draco Meteor'!"
158 sol1 = "However, my Pokemon had a special ability, it made me immune to all of the opponents attacks."
159

```

The input words and the predefined words (selected using randomization method) are used to be replaced in the story template during story generation process.


```

147
148 # Following section declares some lists/sequences of words. One word from every sequence will be chosen randomly during story generation
149 intro1 = "I, " + name + ", was standing in front of the mysterious trainer..."
150 intro2 = "I, " + name + ", walked through the " + sceneryadj + " place leading to the pokemon stadium."
151 intro3 = "My opponent was standing opposite me."
152 char1 = "I threw my " + adjpkmn + " " + pokemon + " at the trainer, " + enemy + ", and attacked."
153 char2 = "I summoned my " + adjpkmn + " " + pokemon + " to attack the trainer, " + enemy + "..."
154 char3 = "I Threw my pokeball and out came my " + adjpkmn + " " + pokemon + ", then it suddenly attacked the trainer, " + enemy + "..."
155 prob1 = "The " + random.choice(adj) + " opponent used the most effective move in the book!!!"
156 prob2 = "But the " + random.choice(adj) + " opponent was a dash more energetic and slashed at my Pokemon."
157 prob3 = "The " + random.choice(adj) + " opponent used the strongest dragon type move 'Draco Meteor'!"
158 sol1 = "However, my Pokemon had a special ability, it made me immune to all of the opponents attacks."
159 sol2 = "My Pokemon was quite fragile, luckily it was holding an oran berry so it healed itself and then i shouted a command."
160 sol3 = "Luckily, the opponent had terrible accuracy and missed me."
161 end1 = "I couldn't believe my eyes!!! The opponents Pokemon returned to its pokeball, weary and tired. It fainted."
162 end2 = "The opponent was on it's last breath and finally it fainted."
163 end3 = "I could not believe my eyes, I had just defeated a terribly strong Pokemon!"
164
165 # This step defines the templates' sequences for the story that has been chosen for the stories that are randomly printed during each run
166 intros = [intro1, intro2, intro3]
167 characters = [char1, char2, char3]
168 problems = [prob1, prob2, prob3]
169 solutions = [sol1, sol2, sol3]
170 ends = [end1, end2, end3]
171
172 # This section prints the story based on the random choices selected from the sequence of templates defined in above section.
173 print(random.choice(intros) + random.choice(characters) + random.choice(problems) + random.choice(solutions) + random.choice(ends))
174
175
176 # this section print the end part when you have done .
177 print("-----")
178 print("Thank you for reading our random generated Pokemon battle story.")
179

```

Output:

As the user selects the type of the story as 3. (Pokemon Battle story), some of the questions related to the story type selected by him/her are prompted. Which can be shown in the following figure. Once the users gives the answer to the questions as per his/her requirements, the generated story is reflected on the screen.

```

It was difficult to keep my eyes open as I struggled to breathe.
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
3
Enter the type of Pokemon (e.g. Wailord, Wobbuffet,Solosis, Eevee, Aegislash, Leafeon, Beldum, Arceus):Eevee
Enter the name of Pokemon (e.g. MegaBoy, LemurMan, Chris, Airman, Ash Ketchum, Wally, Bob, Bianca, Tieno):Chris
Enter the enemy of Pokemon (e.g. N, Maxie, Archie, Lysandre, Xerosic, AZ, Jessie,James, Giovanni, Silver, Shelly, Tabitha):Maxie
Enter the adjective about the battle scene (e.g. rumbling, shaking, secret, extremely squeaky, surprising, scary, thorny):secret
Enter the type of Pokemon (e.g. terrifying, thrashing, undefeatable, timid, award winning, shiny, dangerous, glamorous):timid
I, Chris, was standing in front of the mysterious trainer...I Threw my pokeball and out came my timid Eevee, than it suddenly attacked the trainer, Maxie.But the untrustworthy oppone
nt was a dash more energetic and slashed at my Pokemon.Luckily, the opponent had terrible accuracy and missed me.The opponent was on it's last breath and finally it fainted.
-----
Thank you for reading our random generated Pokemon battle story.
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
3
Enter the type of Pokemon (e.g. Wailord, Wobbuffet,Solosis, Eevee, Aegislash, Leafeon, Beldum, Arceus):Leafeon
Enter the name of Pokemon (e.g. MegaBoy, LemurMan, Chris, Airman, Ash Ketchum, Wally, Bob, Bianca, Tieno):Bob
Enter the enemy of Pokemon (e.g. N, Maxie, Archie, Lysandre, Xerosic, AZ, Jessie,James, Giovanni, Silver, Shelly, Tabitha):Archie
Enter the adjective about the battle scene (e.g. rumbling, shaking, secret, extremely squeaky, surprising, scary, thorny):shaking
Enter the type of Pokemon (e.g. terrifying, thrashing, undefeatable, timid, award winning, shiny, dangerous, glamorous):thrashing
My opponent was standing opposite me.I threw my thrashing Leafeon at the trainer, Archie, and attacked.The serious opponent used the strongest dragon type move 'Draco Meteor'!My Poke
mon was quite fragile, luckily it was holding an oran berry so it healed itself and then i shouted a command.The opponent was on it's last breath and finally it fainted.
-----
Thank you for reading our random generated Pokemon battle story.
Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT

```

Exit code

As the choice inputted by the user is to be 4, whole loop is terminated and the user is exited from the story generation process.

```

155 prob1 = "The " + random.choice(adj) + " opponent used the most effective move in the book!!!"
156 prob2 = "But the " + random.choice(adj) + " opponent was a dash more energetic and slashed at my Pokemon."
157 prob3 = "The " + random.choice(adj) + " opponent used the strongest dragon type move 'Draco Meteor'!"
158 sol1 = "However, my Pokemon had a special ability, it made me immune to all of the opponents attacks."
159 sol2 = "My Pokemon was quite fragile, luckily it was holding an oran berry so it healed itself and than i shouted a command."
160 sol3 = "Luckily, the opponent had terrible accuracy and missed me."
161 end1 = "I couldn't believe my eyes!!! The opponents Pokemon returned to its pokeball, weary and tired. It fainted."
162 end2 = "The opponent was on it's last breath and finally it fainted."
163 end3 = "I could not believe my eyes, I had just defeated a terribly strong Pokemon!"
164
165 # This step defines the templates' sequences for the story that has been chosen for the stories that are randomly printed during each run
166 intros = [intro1, intro2, intro3]
167 characters = [char1, char2, char3]
168 problems = [prob1, prob2, prob3]
169 solutions = [sol1, sol2, sol3]
170 ends = [end1, end2, end3]
171
172 # This section prints the story based on the random choices selected from the sequence of templates defined in above section.
173 print(random.choice(intros) + random.choice(characters) + random.choice(problems) + random.choice(solutions) + random.choice(ends))
174
175
176 # this section print the end part when you have done .
177 print("-----")
178 print("Thank you for reading our random generated Pokemon battle story.")
179
180 # this section gives the choice when you want to exit from the generator.
181 elif (choice == '4'):
182     print("you are exited!")
183     break
184 else:#if user enter anything diffrent from choice, he\she will got a text to enter a valid choice.
185     print("Please enter a valid choice!")
186

```

Output:

As the user selects the choice as 1. (Exit), he/she is exited from the story generation process and they cannot make further choice for the story generation process until next run.

```

Enter numeric choice (e.g. 1,2,3....):
1. Plot story
2. Imagination
3. Pokemon Battle story
4.EXIT
4
you are exited!

```

5. TECHNOLOGIES AND FRAMEWORK

Language: Python 3.8.6.

Editor: Visual studio code

6. SWOT ANALYSIS

Strength:

- This project is responsive to the user's requirements as it takes the inputs from the users to generate the story. Thus, the users can frame the story as per their choice of characters' name and their characteristics.

Weakness:

- This project has three types of stores only, which generates different stories randomly using the user's input. Thus, the project can be programmed with more complex story plots, types and iterations for the user inputs.
- The output of the programmed project is shown on the output console of the editor. A more interactive GUI can be provided to the implemented code's output fields.

Opportunities:

- This approach (user driven) can be applied and implemented into educational games for children. The approach allows children to think and provide responses which will then alter the generated story.

Threat:

- Threats related to this projects are that as it generates the stories randomly by taking some inputs fields from the user, as the templates are predefined, the inputs may not fit in the logics of templates, thus may give the story as output which does not satisfies the user logically.