A Project Report On
**Wordle: The Word Game**

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CERTIFICATE

This is to certify that VEDANT G. RADIA Of Class XII A has prepared the report on the Project entitled

"Wordle: The Word Game". The report is the result of his efforts & endeavours. The report is found worthy of acceptance as final project report for the subject Computer Science of Class XII. He has prepared the report under my guidance.

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CERTIFICATE

The project report entitled

'Wordle: The Word Game'

Submitted by **Vedant G. Radia** of Class XII A for the CBSE Senior Secondary
Examination class XII of Computer Science at Kendriya Vidyalaya
has been examined.

SIGNATURE OF EXAMINER

DECLARATION

I hereby declare that the project work entitled 'Wordle: the word game', submitted to Department of Computer Science, Kendriya Vidyalaya, Porbandar, Gujarat is prepared by me. All the coding are result of my personal efforts.

VEDANT G. RADIA

Class XII A

ACKNOWLEDGEMENT

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Vedant G. Radia

Class: XII A

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FILES USED

Random.py

For selecting a word on random

wordle_words(5).txt

List of 5-letter words to select one from

wordle-words(4).txt

List of 4-letter words to select one from

wordle_words(3).txt

List of 3-letter words to select one from

wordle_words(6).txt

List of 6-letter words to select one from

WORKING DISCRPTION

The Wordle Game is an immersive and entertaining word-guessing game built using Python. With its captivating gameplay and customizable difficulty levels, the Wordle Game offers players an engaging experience as they strive to decipher secret words within a limited number of attempts. At the core of the game lies a vast collection of words, carefully curated to cater to different levels of difficulty. Players have the freedom to choose from an extensive range of word lengths, including 3, 4, 5, and 6-letter words. This versatility allows individuals of all skill levels to participate and enjoy the game. Upon selecting their preferred difficulty level, players are introduced to clear and concise instructions that outline the rules and objectives. The game randomly selects a word from the corresponding word list, ensuring a unique challenge with each playthrough.

 As the game commences, players are presented with a user-friendly interface that facilitates smooth interaction. They input their guesses, keeping in mind the specific word length associated with their chosen level. The program meticulously evaluates each guess, providing invaluable feedback to guide players towards the correct answer.

The feedback system in the Wordle Game is designed to assist players in narrowing down the possibilities. Correctly guessed letters that occupy the right position are prominently displayed in uppercase, granting a visual clue to the correct letter placements. Additionally, correctly guessed letters that occupy the wrong position are displayed in lowercase, indicating their presence in the secret word. Conversely, incorrect letters are marked with hyphens (-) on both sides, visually distinguishing them from the correct ones. With each attempt, players witness the puzzle slowly unraveling before their eyes. The game showcases the remaining number of attempts, fueling a sense of urgency and excitement. This element of suspense keeps players fully engaged throughout the gameplay, as they strategize and analyze the feedback to make informed guesses.

THE CODE

```python
import random


#selecting a word

def select_word(wordle_words):

    with open(wordle_words, 'r') as file:

        words = file.readlines()

    return random.choice(words).strip()


#cheaking the guess

def check_guess(secret_word, guess):

    result = ''

    for i in range(len(secret_word)):

        if guess[i] == secret_word[i]:

            result += guess[i].upper() + ' '

            # Correct letter in the right place

        elif guess[i] in secret_word:

            result += guess[i].lower() + ' '

            # Correct letter in the wrong place

        else:

            result += '-' + guess[i] + '-' + ' '

            # Incorrect letter

    return result


#the game

def play_wordle(wordle_words,level):

    secret_word = select_word(wordle_words)


    #3-letter

    if level==3:

        attempts = 10

        guessed = False

        print("Welcome to Wordle! Guess the 3-letter word.")

        print("_____")
```

```python
        #Rules
        print("Instructions:")
        print("- Guess a 3-letter word.")
        print("- The word may contain lowercase letters, uppercase letters, or a
combination of both.")
        print("- If a letter is in the word and used at the right place, it will be
printed in uppercase.")
        print("- If a letter is in the word but not at the correct place, it will
be printed in lowercase.")
        print("- If a letter is not in the word, it will be displayed with a cut (-
) on both sides.")
        print("- You have 10 attempts to guess the word.")
        print("_____")


        #guessing
        while attempts > 0 and guessed == False:
            guess = input("Enter your guess: ").strip().lower()
            #invalid word input
            if len(guess) != 3:
                print("Invalid guess. Please enter a 3-letter word.")
                continue
            attempts -= 1
            result = check_guess(secret_word, guess)
            #correct
            if secret_word.upper() == guess.upper():
                guessed = True
            else:
                print("Attempt remaining:", attempts)
                print("Result:", result)
        #won
        if guessed:
            print("Congratulations! You guessed the word correctly:", secret_word)
        #lost
        else:
            print("Sorry, you ran out of attempts. The word was:", secret_word)
```

```python
#4-letter
    if level==4:
        attempts = 6
        guessed = False
        print("Welcome to Wordle! Guess the 4-letter word.")
        print("_____")
        #Rules
        print("Instructions:")
        print("- Guess a 4-letter word.")
        print("- The word may contain lowercase letters, uppercase letters, or a
combination of both.")
        print("- If a letter is in the word and used at the right place, it will be
printed in uppercase.")
        print("- If a letter is in the word but not at the correct place, it will
be printed in lowercase.")
        print("- If a letter is not in the word, it will be displayed with a cut (-
) on both sides.")
        print("- You have 6 attempts to guess the word.")
        print("_____")


        #guessing
        while attempts > 0 and guessed == False:
            guess = input("Enter your guess: ").strip().lower()
            #invalid word input
            if len(guess) != 4:
                print("Invalid guess. Please enter a 4-letter word.")
                continue
            attempts -= 1
            result = check_guess(secret_word, guess)
            #correct
            if secret_word.upper() == guess.upper():
                guessed = True
            else:
                print("Attempt remaining:", attempts)
                print("Result:", result)
        #won
        if guessed:
```

```python
            print("Congratulations! You guessed the word correctly:", secret_word)
        #lost
        else:
            print("Sorry, you ran out of attempts. The word was:", secret_word)


    #5-letter
    if level==5:
        attempts = 6
        guessed = False
        print("Welcome to Wordle! Guess the 5-letter word.")
        print("_____")
        #Rules
        print("Instructions:")
        print("- Guess a 5-letter word.")
        print("- The word may contain lowercase letters, uppercase letters, or a
combination of both.")
        print("- If a letter is in the word and used at the right place, it will be
printed in uppercase.")
        print("- If a letter is in the word but not at the correct place, it will
be printed in lowercase.")
        print("- If a letter is not in the word, it will be displayed with a cut (-
) on both sides.")
        print("- You have 6 attempts to guess the word.")
        print("_____")


        #guessing
        while attempts > 0 and guessed == False:
            guess = input("Enter your guess: ").strip().lower()
            #invalid word input
            if len(guess) != 5:
                print("Invalid guess. Please enter a 5-letter word.")
                continue
            attempts -= 1
            result = check_guess(secret_word, guess)
            #correct
            if secret_word.upper() == guess.upper():
                guessed = True
```

```python
            else:
                print("Attempt remaining:", attempts)
                print("Result:", result)
        #won
        if guessed:
            print("Congratulations! You guessed the word correctly:", secret_word)
        #lost
        else:
            print("Sorry, you ran out of attempts. The word was:", secret_word)


    #6-letter
    if level==6:
        attempts = 10
        guessed = False
        print("Welcome to Wordle! Guess the 6-letter word.")
        print("_____")
        #Rules
        print("Instructions:")
        print("- Guess a 6-letter word.")
        print("- The word may contain lowercase letters, uppercase letters, or a
combination of both.")
        print("- If a letter is in the word and used at the right place, it will be
printed in uppercase.")
        print("- If a letter is in the word but not at the correct place, it will
be printed in lowercase.")
        print("- If a letter is not in the word, it will be displayed with a cut (-
) on both sides.")
        print("- You have 10 attempts to guess the word.")
        print("_____")


        #guessing
        while attempts > 0 and guessed == False:
            guess = input("Enter your guess: ").strip().lower()
            #invalid word input
            if len(guess) != 6:
                print("Invalid guess. Please enter a 6-letter word.")
                continue
```

```python
            attempts -= 1
            result = check_guess(secret_word, guess)
            #correct
            if secret_word.upper() == guess.upper():
                guessed = True
            else:
                print("Attempt remaining:", attempts)
                print("Result:", result)
        #won
        if guessed:
            print("Congratulations! You guessed the word correctly:", secret_word)
        #lost
        else:
            print("Sorry, you ran out of attempts. The word was:", secret_word)


#running the game
print("Welcome to WORDLE: THE WORD GAME")
print('')
print("We have different levels you can play from:")
print("Easy mode (3-letter word)")
print("Normal mode (4-letter word)")
print("Hard mode (5-letter word)")
print("God mode (6-letter word)")


#selecting level
level=int(input("Enter the number of letter corresponding to the difficulty you
want to play on:"))
if level==3:
    word_file = "wordle_words(3).txt"
    play_wordle(word_file,level)
elif level==4:
    word_file = "wordle_words(4).txt"
    play_wordle(word_file,level)
elif level==5:
    word_file = "wordle_words(5).txt"
```
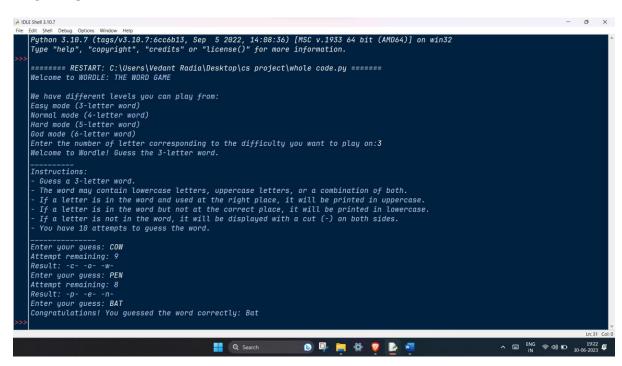
```python
        play_wordle(word_file,level)
    elif level==6:
        print("damn, good luck!")
        word_file = "wordle_words(6).txt"
        play_wordle(word_file,level)
    else:
        print("We Don't Do That Here -late Chadwick Boseman")


#end
```

OUTPUT

STARTING SCREEN:

EASY MODE:

NORMAL MODE:
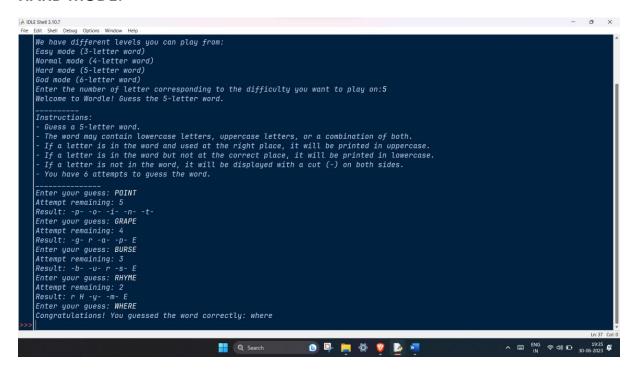
```
Enter the number of letter corresponding to the difficulty you want to play on:4
Welcome to Wordle! Guess the 4-letter word.
----------
Instructions:
- Guess a 4-letter word.
- The word may contain lowercase letters, uppercase letters, or a combination of both.
- If a letter is in the word and used at the right place, it will be printed in uppercase.
- If a letter is in the word but not at the correct place, it will be printed in lowercase.
- If a letter is not in the word, it will be displayed with a cut (-) on both sides.
- You have 6 attempts to guess the word.
---------------
Enter your guess: PLAY
Attempt remaining: 5
Result: -p- -l- a -y-
Enter your guess: SAID
Attempt remaining: 4
Result: -s- A -i- -d-
Enter your guess: BANG
Attempt remaining: 3
Result: -b- A -n- g
Enter your guess: GAVE
Attempt remaining: 2
Result: G A -v- E
Enter your guess: GAME
Attempt remaining: 1
Result: G A -m- E
Enter your guess: GAPE
Attempt remaining: 0
Result: G A -p- E
Sorry, you ran out of attempts. The word was: gaze
>>>
```

HARD MODE:

```
We have different levels you can play from:
Easy mode (3-letter word)
Normal mode (4-letter word)
Hard mode (5-letter word)
God mode (6-letter word)
Enter the number of letter corresponding to the difficulty you want to play on:5
Welcome to Wordle! Guess the 5-letter word.
----------
Instructions:
- Guess a 5-letter word.
- The word may contain lowercase letters, uppercase letters, or a combination of both.
- If a letter is in the word and used at the right place, it will be printed in uppercase.
- If a letter is in the word but not at the correct place, it will be printed in lowercase.
- If a letter is not in the word, it will be displayed with a cut (-) on both sides.
- You have 6 attempts to guess the word.
---------------
Enter your guess: POINT
Attempt remaining: 5
Result: -p- -o- -i- -n- -t-
Enter your guess: GRAPE
Attempt remaining: 4
Result: -g- r -a- -p- E
Enter your guess: BURSE
Attempt remaining: 3
Result: -b- -u- r -s- E
Enter your guess: RHYME
Attempt remaining: 2
Result: r H -y- -m- E
Enter your guess: WHERE
Congratulations! You guessed the word correctly: where
>>>
```
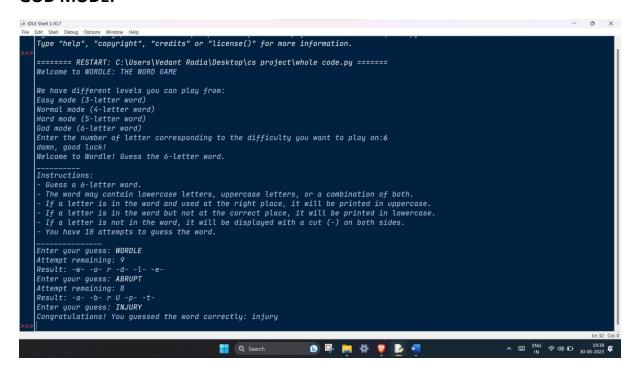
GOD MODE:


```
IDLE Shell 3.10.7                                                                    —  □  ✕
File  Edit  Shell  Debug  Options  Window  Help
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    ======= RESTART: C:\Users\Vedant Radia\Desktop\cs project\whole code.py =======
    Welcome to WORDLE: THE WORD GAME

    We have different levels you can play from:
    Easy mode (3-letter word)
    Normal mode (4-letter word)
    Hard mode (5-letter word)
    God mode (6-letter word)
    Enter the number of letter corresponding to the difficulty you want to play on:6
    damn, good luck!
    Welcome to Wordle! Guess the 6-letter word.
    ----------
    Instructions:
    - Guess a 6-letter word.
    - The word may contain lowercase letters, uppercase letters, or a combination of both.
    - If a letter is in the word and used at the right place, it will be printed in uppercase.
    - If a letter is in the word but not at the correct place, it will be printed in lowercase.
    - If a letter is not in the word, it will be displayed with a cut (-) on both sides.
    - You have 10 attempts to guess the word.
    ----------------
    Enter your guess: WORDLE
    Attempt remaining: 9
    Result: -w- -o- r -d- -l- -e-
    Enter your guess: ABRUPT
    Attempt remaining: 8
    Result: -a- -b- r U -p- -t-
    Enter your guess: INJURY
    Congratulations! You guessed the word correctly: injury
>>>
                                                                                Ln: 32  Col: 0
```

CONCLUSION

In conclusion, the Wordle Game project is an engaging word-guessing game implemented in Python. It challenges players to guess a secret 5-letter word within a limited number of attempts. The game provides clear instructions and feedback, allowing players to strategize and deduce the correct word.

By participating in the Wordle Game, players can enhance their vocabulary, word recognition skills, and logical reasoning abilities. The project offers an enjoyable way to engage in a linguistic activity, improve pattern recognition, and pass the time with a fun and challenging game.

The Wordle Game project serves as a demonstration of how Python programming can be used to create interactive and entertaining word games. It showcases the utilization of file handling, random selection, string manipulation, and user input validation

Overall, the Wordle Game project provides an interactive and enjoyable gaming experience while promoting language skills and logical thinking. It can be further expanded and customized to incorporate additional features, such as difficulty levels or multiplayer functionality, to enhance the gameplay experience.

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