




# TIA3 -Terminal Application



## Zop

A Ruby Quiz Game  
By Nathan Blaga

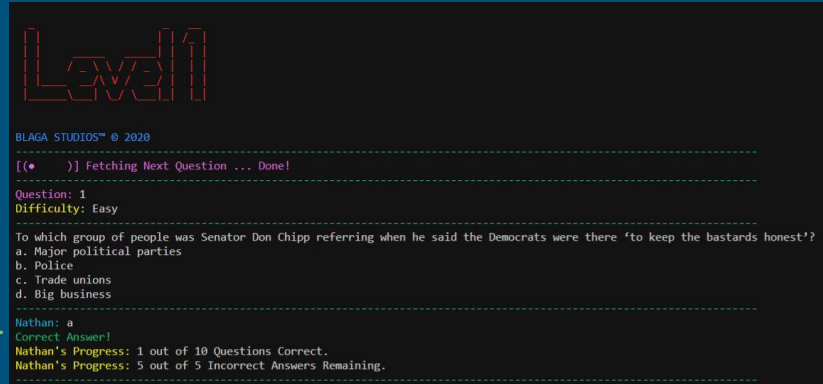


# What Is Zop?

Zop is a Trivia/Quiz game  
Consists of 3 levels  
Each level has 30 unique questions  
The difficulty increases with each level

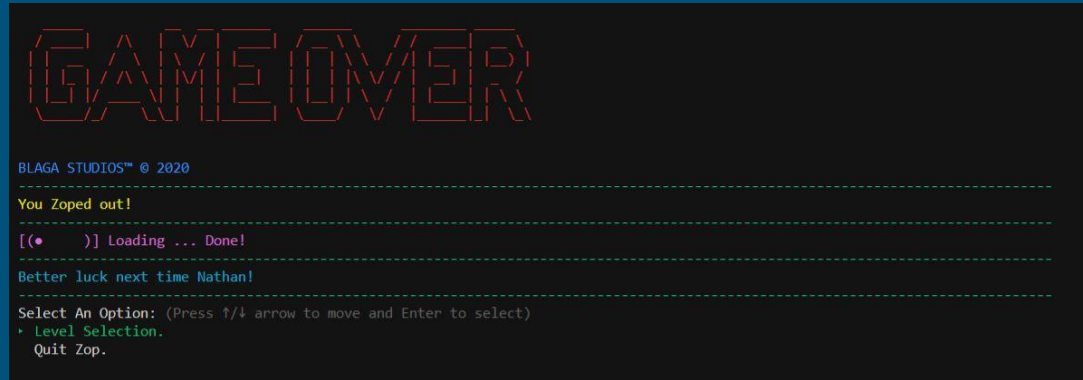
The player must answer 10 correct  
questions to beat the level  
If they answer 5 incorrect answer, it's game  
over

All questions are MCQS  
Each question only contains 1 correct  
answer



# Main Features

- Menu System
- Level Selection
- Level Difficulty
- Rules/Instruction menu
- Displays player progression after each question, including:
  - Number of correct answers
  - Attempts remaining
  - The correct answer



# Logic Behind Code

```
# Player_name class.  
class Player_name  
  def initialize(name)  
    @name = name  
    # Initialises Player name to @name.  
  end  
end
```

```
# Question class.  
class Question  
  attr_accessor :content, :answer, :difficulty  
  def initialize(content, answer, difficulty)  
    @content = content  
    @answer = answer  
    @difficulty = difficulty  
    # Initialises quiz questions to class Question.  
    # Three main instance variables are assigned to question.  
  end  
end
```

# Logic Behind Code

```
questions = [  
    Question.new(Q01, "a", "Novice"),  
    Question.new(Q02, "d", "Novice"),  
    Question.new(Q03, "a", "Novice"),  
    Question.new(Q04, "a", "Novice"),  
    Question.new(Q05, "b", "Novice"),  
    Question.new(Q06, "a", "Novice"),  
    Question.new(Q07, "d", "Novice"),  
    Question.new(Q08, "a", "Novice"),  
    Question.new(Q09, "c", "Novice"),  
    Question.new(Q10, "b", "Novice"),  
]
```

```
Q01 =<<END  
In the Walt Disney film, what type of creature is Bambi?  
a. Deer  
b. Elephant  
c. Mouse  
d. Cat  
END  
# Answer = a
```

# Logic Behind Code

```
for question in questions.shuffle
# For loop to iterate through each question in the questions array in a random(shuffled order).
break if score == 10
# Loop to break if player reaches a score of 10(10 correct answers).
    puts "Question: ".colorize(:light_magenta,) + question_number.to_s
    puts "Difficulty: ".colorize(:yellow,) + question.difficulty.to_s
    # Display the current question number and difficulty of the question.
puts "-----"
    puts question.content
    # Display the current question content.
```

# Logic Behind Code

```
if answer == question.answer
# Checks if inputted answer by player is equal to question.answer stored in array.
    score += 1
    # If true increase score counter by 1.
    puts "Correct Answer!".colorize(:green,)
    # If true display to the player it was the correct answer.
    puts @name.colorize(:yellow,) + "'s ".colorize(:yellow,) + "Progress: ".colorize(:yellow,)
    puts @name.colorize(:yellow,) + "'s ".colorize(:yellow,) + "Progress: ".colorize(:yellow,)
    # Display current score and attempts left to the player.
puts "-----"
else
    attempts -= 1
    # If false decrease score counter by 1.
    puts "Incorrect Answer!".colorize(:red,)
    # If false display to the player it was the incorrect answer.
    puts "The Correct Answer: ".colorize(:green,) + question.answer
    # If false display to the player the correct answer.
    puts @name.colorize(:yellow,) + "'s ".colorize(:yellow,) + "Progress: ".colorize(:yellow,)
    puts @name.colorize(:yellow,) + "'s ".colorize(:yellow,) + "Progress: ".colorize(:yellow,)
puts "-----"
```

# Ruby Gems

- Menu System utilised tty-prompt
- Zop also runs the following gems:
  - tty-spinner
  - colorize
  - artii



# Error Handling

- A validator module was run for the quiz
- Used in a while loop to continuously prevent errors

```
module Validators
  def self.validate_correct_input(answer)
    if answer == "a"
      return true
    elsif answer == "b"
      return true
    elsif answer == "c"
      return true
    elsif answer == "d"
      return true
    else
      return false
    end
  end
end
```

```
-----
Question: 1
Difficulty: Novice
-----
Which of these words is slang for 'money'?
a. Dosh
b. Mush
c. Kudos
d. Hash
```

```
-----
ff: 1
-----
```

```
Invalid Answer!
Please enter either a,b,c,d as your answer.
```

```
-----
1
-----
```

```
Invalid Answer!
Please enter either a,b,c,d as your answer.
```

```
-----
1
-----
```

```
Invalid Answer!
Please enter either a,b,c,d as your answer.
```

# Testing

Manual testing was performed throughout the development of Zop

2 Tests were run:

- `Correct_answer_testing.rb`
- `Score_attempt_testing.rb`

Both tests aided in resolving errors and led to the implementation of the validator module

# Install & Run

## Install Zop:

`./install_zop.sh`

## Run Zop:

`./run_zop.sh`

## Zop-Helper

Ruby `zop_helper.rb`

`-r` for rules

`-i` for instructions

`-d` for difficulty

```
Welcome to Zop Helper!
```

```
-----  
Rules:
```

```
-----  
Choose what level of Zop you wish to play.
```

```
Each level has 30 unique questions.
```

```
Answer 10 questions correctly to beat the level and progress.
```

```
Answer 5 questions incorrectly and game over.
```

```
Question difficulty will dramatically increase as you progress through the levels.
```

```
Have fun!
```

# Review

## Challenges:

- Seeing a plan/feature through until the end

## Favourite Parts:

- Solving errors and issues with the code
- Showing more of my creative side
- Watching a player run through the game for the first time without errors



# GitHub



[https://github.com/NJBLAGA/NathanBlaga\\_T1A3](https://github.com/NJBLAGA/NathanBlaga_T1A3)

