

Client: Otaku Interactive Studios

Assigned Teams: DSA-UOL

Supervisor: Muhammad Hanan

The University of Lahore, CS & IT Department

Project Title: AnimeKinator — A Console-Based Anime Character Guessing Game

Start Date: 29/04/2025

Total Marks: 80

Due Date: 25/05/2025

Program: BSCS

Instructions

1. Understanding the problems is part of the project. So, no query, please.
 2. You will get zero marks if found any type of plagiarism or AI generated code.
 3. No submission after due date.
 4. Submit a zip file containing your project files, including all .cpp files, header files, and any CSV or TXT files used.
 5. There must not be any Syntax Error in Code. If your code fail to execute during evaluation you will automatically lose 50 % marks.
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Project Overview:

Otaku Interactive Studios is seeking a prototype for a console-based anime guessing game inspired by the popular Akinator game (available on App store and Play store). The goal is to engage anime fans with a fun, interactive guessing game that uses character traits to guess which anime character the user is thinking of.

The project is to be developed in C++ and should focus on efficient data processing using core principles of data structures. The character data will be provided by the client in the form of a structured dataset (Anime_Triats.csv). The application will interact with users via the console interface and offer an engaging game loop.

Key Features Required:

1. **User Interaction**
 - Simple and interactive console-based user interface
 - User is asked a series of yes/no questions
 2. **Decision Logic**
 - The game must use a logical flow based on trait-based questions
 - The game should reach a guess based on user responses
 3. **Learning Feature**
 - If the game guesses incorrectly, it must be able to learn the new character and distinguishing question from the user
 4. **Persistence**
 - The game should store user-taught data to improve over time and retain learning between sessions
 5. **Replay and Navigation**
 - Option to replay or exit
 - Summary of the game round at the end
 6. **Client Branding**
 - Display client name (Otaku Interactive Studios) at the start
 - Clean, clear, and fun game introduction
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Dataset

- Dataset of anime characters and traits will be provided by the client
 - Students are expected to analyze and utilize this dataset to drive the guessing logic
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Important Notes:

- Dataset and branding are provided and must be respected in the interface.
 - This prototype is a proof of concept and may be extended in future contracts.
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Sample Gameplay Examples:

Example 1: (Basic Gameplay Logic — Correct Guess)

Welcome to AnimeKinator by Otaku Interactive Studios!
Think of an anime character and I will try to guess it.

```
Q: Is the character male? (yes/no)
> yes
Q: Is he a ninja? (yes/no)
```

```
> yes
Q: Is he from "Naruto"? (yes/no)
> yes
My guess is: Naruto Uzumaki
Was I correct? (yes/no)
> yes
Great! I guessed it right!
```

Example 2: (Incorrect Guess — Learning New Character)

Welcome to AnimeKinator by Otaku Interactive Studios!
Think of an anime character and I will try to guess it.

```
Q: Is the character male? (yes/no)
> yes
Q: Is he from "Attack on Titan"? (yes/no)
> yes
Q: Does he transform into a Titan? (yes/no)
> yes
My guess is: Eren Yeager
Was I correct? (yes/no)
> no
Oh no! Who was your character?
> Zeke Yeager
What question would distinguish Zeke Yeager from Eren Yeager?
> Does he have a beard?
What is the answer for Zeke Yeager? (yes/no)
> yes
Thank you! I'll remember this next time.
```

Example 3: (Adding a Completely New Character Not in Dataset)

Welcome to AnimeKinator by Otaku Interactive Studios!
Think of an anime character and I will try to guess it.

```
Q: Is the character female? (yes/no)
> yes
Q: Is she from "Chainsaw Man"? (yes/no)
> yes
Q: Is she a public safety devil hunter? (yes/no)
> yes
My guess is: Power
Was I correct? (yes/no)
> no
Oh no! Who was your character?
> Makima
What question would distinguish Makima from Power?
> Does she have control powers?
What is the answer for Makima? (yes/no)
> yes
Thanks! I've added this to my knowledge.
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We look forward to seeing your creativity and technical skills come together in AnimeKinator!