Lab 2 – ReasonED.io Requirements & Specifications

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1 Introduction

1.1 Purpose

The purpose of this document is to provide the design of ReasonED.io, a platform for game-based learning, focused on enhancing users' ability to identify logical fallacies through age-appropriate games. The intended audience of this document extends to individuals, groups, and organizations working on ReasonED.io or looking to better understand the tool and how it works.

1.2 Scope

The goal of the software is to address the pressing need for enhanced critical thinking skills in the modern digital age, where the internet is overwhelmed with information. By providing a game-based learning platform, the aim is to cultivate users' ability to identify logical fallacies, thereby mitigating the widespread of misconceptions and inaccurate information online.

ReasonED.io empowers users to browse online content with judgement, equips educators with valuable resources to enhance critical thinking education, and fosters a culture of logical reasoning. Through interactive games and supplementary materials, ReasonED.io aims to instill in users the skills necessary to recognize and critically evaluate arguments, promoting intellectual toughness and informed decision-making.

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1.3 Definitions, Acronyms, and Abbreviations

Confirmation Bias - A cognitive bias that involves seeking, interpreting, and remembering information that confirms one's preconceptions (American Psychological Association n.d.).

Critical Thinking - The ability to think clearly and rationally, understanding the logical connection between ideas and the ability to make reasoned judgements (American Psychological Association n.d.).

Fact-Checking - The process of verifying the accuracy of claims made in public discourse and journalism (Cambridge English Dictionary n.d.).

False Dilemma - A fallacy that presents a limited set of options as the only possible choices when there may be other alternatives (Excelsior OWL n.d.).

Logical Fallacy - An error in reasoning or a flawed argument that can make an argument appear valid when it is not (Nikolopoulou, 2023).

Misinformation - False or inaccurate information shared, often unintentionally, without the intent to deceive (Dictionary.com n.d.).

Disinformation - False information deliberately spread to deceive or mislead others (Dictionary.com n.d.).

Slippery Slope - A fallacy that suggests one small step will inevitably lead to a chain of related events, often with exaggerated consequences (Excelsior OWL n.d.).

Straw Man Argument - A fallacy that involves misrepresenting an opponent's argument to make it easier to attack and refute (Excelsior OWL n.d.).

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1.5 Overview

Section 2 of this document describes ReasonED.io in general terms. Section 3 presents the detailed requirements, organized by feature.

2 Overall Description

2.1 Product Perspective

ReasonED.io is set to emerge as a platform for game-based learning, with a specific focus on honing users' ability in identifying logical fallacies through engaging gameplay. The platform will offer distinct game collections tailored for elementary, middle, high school, and adult users, all aimed at introducing and refining logical fallacy detection skills. Each collection will cater to the unique challenges and learning approaches associated with different age groups.

One of the highlighted game series on the platform features personified logical fallacies, each depicted by a character with its own distinctive traits. These characters encounter various disputes, prompting players to navigate through them by selecting responses, avoiding logical fallacies. The games are meticulously created for elementary, middle, and high school demographics, with adjustments made to complexity and response options. Examples of these games include Straw Manny, Hasty Harry, and Slippery Slope Sadie.

2.2 Product Functions

ReasonED.io implements many diverse features designed to facilitate effective learning and engagement:

- PC and Tablet Compatibility: ReasonED.io is accessible across various devices, ensuring users can engage with the platform seamlessly whether on a desktop computer or a tablet device.

- Characters and Animations: The platform incorporates vibrant characters and interactive animations to enhance user engagement and make learning about logical fallacies enjoyable and memorable.

- Accessibility Features: ReasonED.io prioritizes inclusivity by offering accessibility features such as text-to-speech options, making the platform accessible to users with diverse needs and preferences.

- Educator Tools: The software provides comprehensive educator tools to support teachers in effectively integrating logical fallacy education into their curriculum. These tools include progress tracking, printable graphics, and resources for lesson planning.

- Paid Features: While the core features of ReasonED.io are available for free, the platform also offers premium paid features for users seeking additional content or advanced functionalities.

- Games for K-12+: ReasonED.io hosts a collection of engaging games tailored for students from kindergarten through 12th grade and beyond. These games are designed to cater to different age groups and educational levels, ensuring that users can progress through the platform as they advance in their academic journey.

2.3 User Characteristics

There are various user roles to ensure effective utilization of the platform's features and resources. These roles consist of both customers and end-users, each with distinct responsibilities and interactions of using the platform:

Customers:

- K-12 Schools: Educational institutions that utilize ReasonED.io as a supplementary tool for enhancing critical thinking skills among students.

- Colleges and Universities: Higher education institutions that integrate ReasonED.io into classroom learning to provide an interactive approach to logical fallacy education.

- Educational Publishers: Companies or organizations seeking innovative educational tools may utilize ReasonED.io as a resource to enhance their offerings.

End Users:

- K-12 Students (including Homeschoolers): Students in kindergarten through 12th grade who engage directly with ReasonED.io to improve their critical thinking abilities through age-appropriate games and resources.

- College Students: Higher education students who utilize ReasonED.io as a complementary tool to reinforce their understanding of logical fallacies and critical thinking concepts.

- Educators: Teachers and instructors at all levels who leverage ReasonED.io to supplement their curriculum and provide interactive and engaging resources for logical fallacy education.

- General Public: Individuals outside traditional educational settings who have an interest in fostering critical thinking skills or who seek to improve their own logical reasoning abilities through ReasonED.io's accessible platform.

2.4 Constraints

N/A

2.5 Assumptions and Dependencies

N/A