

VEBO Gamification Web Application

Student



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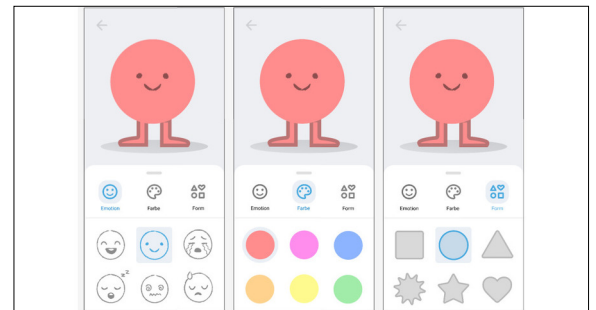
Initial Situation: The Swiss cooperative VEBO Genossenschaft is committed to facilitating employment opportunities for individuals with impairments and disabilities. The organization's vision encompasses the provision of services and programs designed to facilitate skill development and workforce integration for its employees. A research project is currently underway, to develop a web platform incorporating gamification elements to enhance employee engagement in sheltered workspaces. The development process has been informed by existing scientific studies and a low-fidelity prototype created in Figma. The objective of this thesis is to develop a web application that employs a gamified approach to enhance employee engagement in sheltered workspaces. The aforementioned Figma prototype and scientific studies serve as the foundation for this development. The principal objective is to develop a component that enables users to create and manage avatars, thereby allowing customization of their shape, colour, and emotional expressions.

Approach / Technology: The methodologies employed include a use case analysis derived from the Figma prototype and existing scientific studies, along with a domain analysis to identify component requirements and examine the gamification aspects in greater detail. The web application has been developed using the React framework and the Material UI component library. The application is subjected to comprehensive end-to-end testing utilizing the Cypress testing framework, to ensure its robustness.

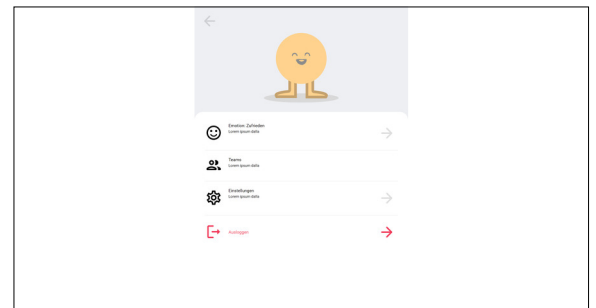
Result: The web application comprises two principal components: an avatar editor and a profile page. Both adhere to the design principles set out in the Figma

prototype and the scientific studies. The initial testing methods have been implemented to verify the application's functionality. The development of the web application has been carried out following the provided guidelines, ensuring that the components are prepared for integration into the final web platform.

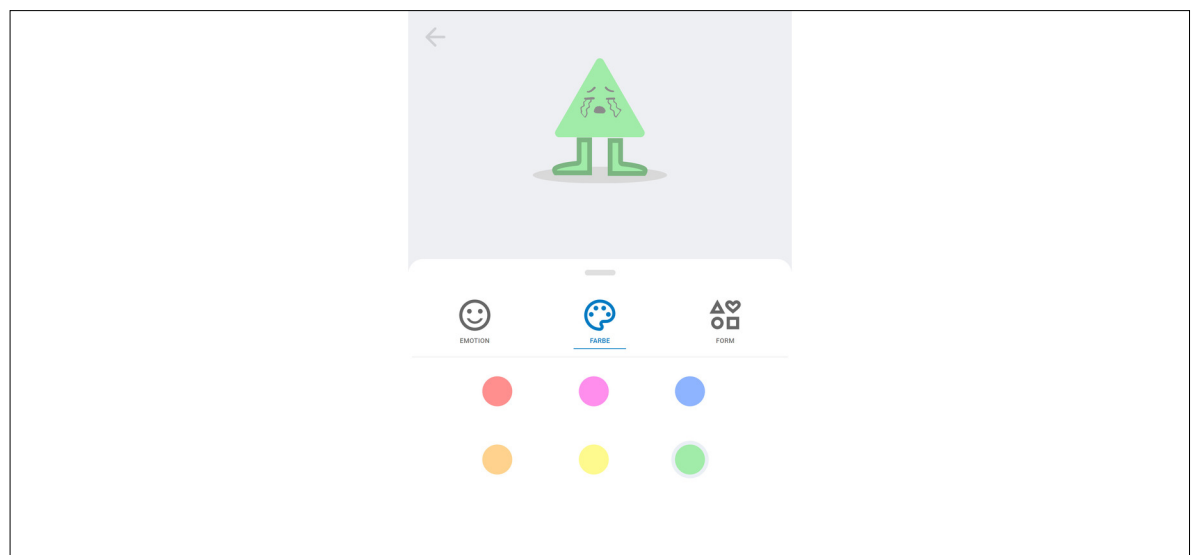
Figma low-fidelity prototype avatar editor component
I3 Institute for Interactive Informatics



Developed profile component
Own presentation



Developed avatar editor component
Own presentation



Advisor

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Subject Area

Computer Science

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