Product Documentation

https://charliesilver.pythonanywhere.com 21/03/24

The requirement for this coursework has been to create a web application that uses gamification to promote sustainability on campus for people at the University of Exeter. With this goal in mind our team has created the foundations of Sustain, a web application that combines education and action in an engaging and interactive way. Our product utilises tasks such as MCQs and personal interaction to achieve the task of raising awareness towards sustainability. The current build is the result of two sprints, and we have completed our backlog set out in the original MoSCoW requirements.

The QR challenges serve as an educational tool, introducing users to sustainability concepts and practices, while also incentivising them to explore the campus. MCQs have been curated from information on the University of Exeter sustainability webpage which have QR codes assigned to them. Our showcase will show how Game keepers can use the admin section on the navbar to create challenges, badges, and monsters into the database for users to interact with.

The MCQs encourage critical thinking and reflection, while also introducing users to bite-sized information in an engaging format. This task is in line with the goals of the client, as when users encounter similar situations in real life and across campus, they can draw from the knowledge gained through the MCQs to make positive choices and build impactful habits. Some of the questions, like the one below, are directly drawn from policies put in place by the University, which informs users of ways they can collaborate with the client to increase levels of sustainability.

Example Question: What should you do with mobile phones for disposal?

Answer: Return any broken/damaged handsets to the University account manager who will arrange disposal.

Ultimately the inclusion of MCQs elevates the impact of our product in regard to sustainability through increased engagement, behavioural change, and policy advocacy. Our team also anticipates that MCQs will create a community dialogue, where students can discuss answers for particularly challenging questions, leading to collective learning and awareness.

The People Challenges section allows users to engage with notable figures on campus. These figures could be influential faculty members, sustainability experts, or campus leaders. By interacting with these people, users will create real-world connections to people that truly care about sustainable practices, which will not only work to inspire them, but also foster a commitment to sustainability beyond the game itself.

The Learning Page serves as a central hub for users seeking to enhance their understanding on sustainability. By providing relevant and concise information, it equips users to tackle the MCQs more effectively. Users can refer to the page to refresh their memory on key concepts, facts, and best practices related to sustainability. It acts as a study guide to help users prepare for challenges within the game.

**UI Design**  
The UI design for the Sustain web application prioritises user-friendliness and visual consistency. It features an intuitive interface with clear navigation and interactive elements, ensuring accessibility across various devices and catering to users of all technical backgrounds. Visually engaging gamification elements, such as badges and monsters, are seamlessly integrated to enhance user motivation and enjoyment. Additionally, attention has given to responsive design principles and accessibility considerations, ensuring a positive user experience for all individuals, including those with disabilities. A clean and organized admin interface facilitates easy management of challenges, users, and data, while prototypes and usability testing guide iterative improvements to the UI design based on user feedback.

**Requirements Analysis**

* User Authentication and Profile Management:
  + Users should be able to create accounts and log in securely.
  + Profile management features should include options to edit personal information, view progress, and track achievements.
* Educational Content Integration:
  + MCQs should cover a wide range of sustainability topics relevant to the University of Exeter.
  + MCQs should be categorized appropriately for easy navigation and targeted learning.
  + QR challenges should be integrated seamlessly within the app, providing additional educational content and opportunities for exploration.
  + All educational content should be sourced accurately and ethically, with proper citation where necessary.
* Gamification Elements:
  + Badges and rewards should be designed to incentivize user engagement and progression.
  + Monsters and other interactive elements should be visually appealing and aligned with the sustainability theme.
  + Challenges should be diverse in nature, catering to different user preferences and learning styles.
* Administrative Interface:
  + The admin section should be accessible only to authorized personnel.
  + Game keepers should be able to create, edit, and delete challenges, badges, and monsters easily.
  + Administrative actions should be logged for accountability and audit purposes.
* User Interaction:
  + Users should have opportunities to engage with notable figures on campus through the People Challenges section.
  + The platform should facilitate meaningful interactions between users and campus leaders/experts.
  + Feedback mechanisms should be in place to gather user insights and suggestions for improvement.
* Learning Resources:
  + The Learning Page should be structured logically, with clear navigation and search functionality.
  + Content should be presented in various formats (text, images, videos) to cater to different learning preferences.
  + Information should be regularly updated to reflect the latest sustainability practices and initiatives.
* Community Engagement:
  + Features should be included to encourage community dialogue and collaboration among users.
  + Discussion forums, chat rooms, or social media integration can be implemented to facilitate peer-to-peer learning and knowledge sharing.
* Performance and Scalability:
  + The web application should be optimized for performance to ensure smooth user experience.
  + Scalability considerations should be taken into account to accommodate potential growth in user base and content volume.
  + Load testing and performance monitoring should be conducted regularly to identify and address any bottlenecks.
* Accessibility and Compatibility:
  + The platform should be accessible to users with disabilities, complying with relevant accessibility standards (e.g., WCAG).
  + Compatibility with different devices and browsers should be ensured to reach a wider audience.
* Data Privacy and Security:
  + Measures should be implemented to protect user data and ensure compliance with relevant data protection regulations (e.g., GDPR).
  + Secure authentication protocols and data encryption should be used to safeguard sensitive information.
  + Regular security audits and updates should be conducted to mitigate potential vulnerabilities.

# User Manual:

First a quick note from us,

We are Scrum Buddies, a passionate and tight-knit team of student developers committed to promoting sustainability through education. Our mission is to make learning about sustainability not just accessible, but also engaging and enjoyable. We believe that everyone has a role to play in protecting our planet, and we want to empower individuals to make a difference in their own unique ways. That's why we created Sustain, an innovative game that combines education and action in a fun and interactive way. In Sustain, players can challenge their knowledge about sustainability, participate in community activities, and earn points to track their contributions. The game is designed to be both informative and entertaining, providing players with a rewarding experience as they learn about sustainability and take steps to implement sustainable practices in their daily lives. Join us in our journey towards a more sustainable future. Play, learn, and make a difference with Sustain.

**Getting Started**

Visit <https://sustainexe.com> to play Sustain. Upon loading the site, you’ll be greeted with the homepage. Navigate to the ‘Account’ option in the navbar at the top of the screen to register. After registration, go to ‘Profile’ to create your user profile. Here, you can personalise your profile by choosing a profile picture, adding a bio, and specifying your pronouns. Once your profile is set up, you’re ready to start playing! Navigate to the tasks selection, select some challenges, and begin your journey towards sustainability.

**Features and Functionality**

* Engage in our QR challenges by visiting specified locations and scanning the provided QR codes. Upon scanning, you’ll be directed to a page containing a Multiple-choice question challenge, testing your knowledge of sustainability. Successfully completing these challenges will earn you points.
* In People Challenges you have the opportunity to interact with notable figures on campus and gain their approval for your sustainable actions. Upon successful interaction, you will be granted a code that earns you additional points. Keep an eye out for these figures and seize every opportunity to earn these valuable points.
* Find and fight carbon monsters that have been causing havoc around campus. Defeating these pesky foes is another fun way to earn points.
* Collect badges by completing challenges and other engaging in the game in other ways. These badges can be viewed on your profile so start collecting them now!
* Teams play a pivotal role in your journey as a player. Choosing your team is an important decision as it can't be changed later. Team members can collaborate to earn points and show everyone that they're the most sustainable group around! Remember, your chosen team influences your interactions with other players.
* Interact with the app based on your location using the GPS challenge. Complete tasks by going to the location in real life.
* The Leaderboard lets you see how you rank against other players in the game, as well spotlighting the highest 10 performing players. You’ll also be able to see how each team stacks up against each other in the Team Leaderboard and information on your position.
* The Learning Page is a comprehensive resource for enhancing your knowledge about sustainability. It provides valuable information that can help you answer the multiple-choice questions more effectively. The page also includes a sidebar with links to different ways to progress your learning journey.

**Frequently Asked Questions**

How can I earn points?

Points can be earned by completing tasks, interacting with notable figures on campus, and participating in other activities within the web app. The more you engage with the app and it’s features, the more points you can earn.

How can I earn badges and what do they represent?

Badges are a way to recognise your achievements in the application. You can earn badges by meeting certain criteria. For example, you can earn the ‘Sustainability Star’ badge by completing 3 of any challenges in the game. Each badge has a unique image and description, which you can view by hovering over the badge image in your profile, alongside information of the date it was earned.

How can I view my current leaderboard position?

Your current leaderboard position is displayed in the ‘Leaderboard’ section of your profile, and the ‘Your Position’ section on the dedicated Leaderboard page. This position is determined by the number of points you’ve accumulated compared to other users. Please note that your leaderboard position may change as other players earn points.

How can I join a team and what is its significance?

You can join a team through the ‘Join a Team’ button on your profile. Being part of a team allows you to collaborate with other users and work together towards common goals. Your team affiliation is displayed in your profile.

Who can I contact for further information and assistance?

If you need further assistance, please contact our support team at support@sustain.com

How does the app collect and use my information?

Our application collects and uses your information in accordance with our Privacy Policy, which has been designed to be compliant with the **General Data Protection Regulation (GDPR**). We take your privacy very seriously. For more detailed information about how we collect, use, and protect your information, please refer to our Privacy Policy found on the web app.

# **Privacy Policy**

Effective Date: 21-03-2024

This Privacy Policy describes how ScrumBuddies collects, uses, shares, and protects the personal information of users who access or use our Sustain platform.

## **1. Information We Collect**

We collect the following types of personal information:

* **Account Information:** When you create an account, we may collect your name, email address, username, password, and other account details.
* **Game Information:** When you complete tasks on our platform, we collect and maintain scores, friends, and other details.
* **Location Information:** Some aspects of the platform require proof of location

## **2. How We Use Your Information**

We use the personal information we collect for the following purposes:

* To provide and maintain the platform;
* To communicate with you about your account, and inquiries;
* To personalize your experience and improve our products and services;
* To detect, prevent, and address technical issues and fraudulent activities;
* To comply with legal obligations and enforce our policies.

## **3. Data Sharing**

We may share your personal information with the following parties:

* **Service Providers:** We may share your information with third-party service providers who help us operate the platform, provide customer support, or conduct marketing activities.
* **Business Partners:** We may share your information with business partners or affiliates for joint marketing or promotional purposes.
* **Legal Compliance:** We may disclose your information to comply with legal obligations, enforce our policies, respond to legal requests, or protect our rights, property, or safety.
* **With Your Consent:** We may share your information with your consent or as otherwise disclosed at the time of collection.

## **4. Data Security**

We implement appropriate technical and organisational measures to protect the security of your personal information.

However, please note that no method of transmission over the internet or electronic storage is 100% secure, and we cannot guarantee absolute security.

## **5. Your Rights**

You have the following rights regarding your personal information:

* **Access:** You have the right to access and receive a copy of your personal information.
* **Rectification:** You have the right to correct any inaccurate or incomplete information.
* **Erasure:** You have the right to request the deletion of your personal information.
* **Restriction:** You have the right to restrict the processing of your personal information.
* **Objection:** You have the right to object to the processing of your personal information.
* **Data Portability:** You have the right to receive your personal information in a structured, commonly used, and machine-readable format.

To exercise your rights or for any inquiries about our privacy practices, please contact us at support@sustain.com

## **6. Policy Updates**

We may update this Privacy Policy from time to time by posting the revised version on the platform. The revised policy will be effective as of the effective date indicated at the top of the page.

## **7. GDPR Compliance**

We comply with the General Data Protection Regulation (GDPR). If you are a user in the European Union, you have the following additional rights:

* **Consent:** We will ask for your consent before collecting your personal information for certain purposes, such as marketing.
* **Data Portability:** You have the right to request a copy of your personal information in a structured, commonly used, and machine-readable format.
* **Erasure:** You have the "right to be forgotten," which means you can request the deletion of your personal information.
* **Restriction and Objection:** You have the right to restrict or object to our processing of your personal information.

To exercise your rights under the GDPR, please contact us at support@sustain.com