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PROG27545 Web Application Design & Implementation

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**Assignment 2**

**P1) Procedure of NeedFinding**

1. Who are the end users (audience) of the app you designed prototype for?

* The primary end users of the Sheridan Course App are:
  + **Sheridan College students**: The undergraduate and graduate students who require assigning and tracking of their course load, assignments, and academic performance.
  + **Professors and Instructors**: Faculty who supply course content, work, and grades.
  + **Academic Advisors**: **The personnel who assist students with course selection and academic counseling.**
  + **Administrative Staff**: The people in charge of student registrations, courses, and academic records.

1. What should you consider for each group of audience for your app?

* Students:
  + A user-friendly interface with easy and smooth navigation.
  + Such features as course schedules, notifications, and reminders.
  + The mobile responsiveness for the access of different devices.
* Professors and Instructors:
  + The capability to upload and manage course content.
  + Grade control and handling of assignment submissions.
  + Secure and effective communication with students.
* Academic Advisors:
  + The ability to view student course history and academic progress.
  + Tools for course selection and academic counselling.
* Administrative Staff:
  + Capabilities to control enrollments and alter course listings.
  + Secure data management, and role-based access control.

1. Find similar successful apps (minimum 5 apps) to your application, and investigate what users liked or disliked about the application. Mention top five apps almost similar to yours.

|  |  |  |
| --- | --- | --- |
| App Name | What Users Liked 👍 | What Users Disliked 👎 |
| Blackboard Learn | Easy Course Material access,  Assignment tracking | Confusing UI, Complex Navigation |
| Canvas Student | Modern UI, mobile-friendly | Occasional Sync Issues, Slow Loading time |
| Google Classroom | Simple Interface, Easy Collaboration tools | No built-in Course Planning features |
| Moodle | Highly Customizable, supports multiples files format | Outdated UI, can be slow and buggy |
| Edmodo | Social Learning features, good messaging | Limited integration with school databases and Pricey too |

1. What examples of latent needs can you think of?

Unperceived needs are those which the user may not know of but are crucial in enhancing the experience. Some of the latent needs for the Sheridan Course App are:

* 1. Smart Reminder – It gives notification to the students about their upcoming events like assignment due dates and
  2. Offline Access to Course Materials – Enables students to download lecture notes and assignments and use them when offline.
  3. GPA Prediction Tool – It enables students to determine their probable grades from previous performance.
  4. AI Chatbot Support – A chatbot that can provide academic information within the app (e.g., when does the course drop deadline?).

1. What are good ways of finding latent needs?

To identify **latent needs**, we can use the following methods:

* 1. Watching Student Workaround – This is achieved by observing how students presently tackle assignments, schedules, and reminders. If they use external apps like Notion or Google Keep, it means there is a missing feature.
  2. In-Depth Interviews – Don’t ask, “Do you need this feature?” Instead, ask “How do you manage your assignments?” to discover pain points.
  3. Analyzing Feedback on Similar Apps – Look at app reviews for Canvas, Blackboard, and Google Classroom to see what users find frustrating.
  4. Prototype Testing & A/B Testing – Let students try a beta version of the app, and track which features they engage with the most.
  5. Surveys & Polls – Get students to tell you what problems they have with the current Sheridan systems and then find where everyone bugs down.

**P2) Procedure of Competitive Analysis**

1. **Identifying the Top 5 Competitor Apps**

* **Based on the Sheridan Course App, the top five competitors are:**
  + 1. **Canvas Student**
    2. **Blackboard Learn**
    3. **Google Classroom**
    4. **Moodle**
    5. **Edmodo**

**These apps provide similar course management and student engagement features.**

1. **Competitor Analysis Matrix**

* **Below is the Competitive Analysis Matrix, comparing your app with competitor apps based on key features:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Features / Solution | Canvas Student | Blackboard Learn | Google Classroom | Moodle | Edmodo | Sheridan Course App |
| Course Enrollment | **✅** | **✅** | **✅** | **✅** | **✅** | **✅** |
| Assignment Submission | **✅** | **✅** | **✅** | **✅** | **✅** | **✅** |
| In-app Messaging | **✅** | **✅** | **❌** | **✅** | **✅** | **✅** |
| Offline Access | **✅** | **❌** | **❌** | **✅** | **❌** | **✅** |
| GPA Prediction | **❌** | **❌** | **❌** | **❌** | **❌** | **✅** |
| Smart Reminder | **❌** | **❌** | **❌** | **❌** | **❌** | **✅** |
| AI Chatbot for Course Help | **❌** | **❌** | **❌** | **❌** | **❌** | **✅** |

**✅ = Feature Available**

**❌ = Feature Not Available**

1. **Competitor Scores (Feature-based Evaluation):**

**We assign points based on feature importance:**

* **Course Enrollment (10 pts)**
* **Assignment Submission (10 pts)**
* **In-app Messaging (8 pts)**
* **Offline Access (6 pts)**
* **GPA Prediction (8 pts)**
* **Smart Reminders (7 pts)**
* **AI Chatbot (6 pts)**

|  |  |  |
| --- | --- | --- |
| App Name | Total Score | Competitor Score (%) |
| Canvas Student | **34/55** | **51.82%** |
| Blackboard Learn | **28/55** | **50.91%** |
| Google Classroom | **20/55** | **36.36%** |
| Moodle | **34/55** | **51.82%** |
| Edmodo | **28/55** | **50.91%** |
| Sheridan Course App | **55/55** | **100%** |

* **As we can see our app has unique features like GPA Prediction, Smart Reminders, and AI Chatbot, which gives our app a competitive advantage.**

1. **UX/HCI Issues in Competitor Products:**

**Some competitors’ UX issues that we can improve in the Sheridan Course App are listed here.**

|  |  |
| --- | --- |
| **Competitor** | **UX/HCI Issues** |
| **Canvas Student** | **Slow performance on large class files.** |
| **Blackboard Learn** | **Confusing navigation for new users.** |
| **Google Classroom** | **Limited UI customization for students.** |
| **Moodle** | **Outdated UI, difficult for beginners.** |
| **Edmodo** | **Limited integration with other school systems.** |

**Improvements for Sheridan Course App:  
☑️ Modern, user-friendly UI  
☑️ Seamless navigation  
☑️ Faster loading speeds  
☑️ Better integration with Sheridan College systems**

1. **A black and white screen with white text

   Description automatically generatedDesign Heuristics & Score for My Prototype**

**Screens screenshot of a group chat

Description automatically generated**