Lab 1 – Productive Places Product Description

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1.   Introduction

Students and remote workers face a problem: finding environments suitable for

productivity outside of the house. This can stem from multiple factors: home

factor limitations, space constraints, and limited helpful resources. Some home

factor limitations that students and remote workers face include distractions,

family, and limited structure. Meanwhile, some space constraints that are present

are limited hours, inconsistent amenities, limited seating, and noise levels. Lastly,

there are limited helpful resources available for students and remote workers. For

example, there are no centralized platforms for finding suitable workplaces, the

process of finding a suitable workspace can be a time-consuming process, there

are varying amenities availability, and there is no occupancy information.

Thus, our group presents "Productive Places", a web application designed to help

students and remote workers find optimal locations to work and or study, without

the hassle of home factor limitations, space constraints, and limited helpful

resources. Multiple features will be provided to refine the process of finding a

suitable place to be productive outside the home: Location-Based Search,

Advanced Filtering for amenities, Community-driven reviews and ratings,

Real-time availability updates, and Detailed Workspace Profiles.

2. Productive Places Product Description

Our solution to the problem of finding suitable environments for being productive outside of the house is a tool for filtering user-reviewed establishments. The goal of our software is to provide a method for finding efficient studying locations that fit the specific needs of each student, including operating hours, WiFi availability, and charging outlets.The primary objective of our target users is to find optimal locations nearby that are open, fill their needs, and have been reviewed by others to be acceptable places to study.

2.1. Key Product Features and Capabilities

Users can search for optimal locations suited for being productive, use filters to customize their searches based on their specific needs, and use filters to find locations that remain open during hours that fit their schedule.The proposed web application will have a selection dedicated to user-generated reviews to help potential visitors.

2.2. Major Components (Hardware/Software)

Linux will be used as the Operating System to manage git commands and set file permissions.Apache will be used as the webserver, where students, Workers, and Business Owners can access the web application, and Nodejs will be a supplement to the web server. PostgreSQL will be the database that is used, and the backend web server will communicate with the database.

3.   Identification of Case Study

This product is being developed for students who struggle to concentrate on studying and completing schoolwork at home for various reasons. Many students cannot find a quiet place to study, and people needing a quiet place to work, eat, or communicate may also use this application.

4.   Productive Places Product Prototype Description

The prototype will be a Web-Based Platform, and it will be able to Locate Productive Places. Also, Core Functionalities will be implemented like location search, user management, location information, and user interface.

4.1.   Prototype Architecture (Hardware/Software)
- Linux
- Apache
- Node
- PostgreSQL

4.2.   Prototype Features and Capabilities

This system will have an easy-to-use 5-star rating feature, with an option for users to write a description if they want to add more details. There will also be a simple checklist with "yes" or "no" answers to show if the place has certain options. Users can rate the noise level from 1 to 10 to give a better idea of how quiet or loud the place is. The frontend and backend will connect through APIs, making it simple to use. Passwords will be protected with encryption to keep users safe,

without needing basic password checks. Each place will also have an exact

location so users know exactly where it is.

4.3.   Prototype Development Challenges

As we develop this prototype we as a team may lack the knowledge it will require

to complete every piece of this application. Another obstacle we may run into is

the language we selected for the frontend and backend of this project. We may

lack the capability to implement what we need to fully create this application.

Lastly, the lack of UI/UX design experience may make designing the interface

challenging.

5.   Glossary
- API (Application Programming Interface): A set of rules that allows two software

  applications to communicate with each other and exchange data.
- Body doubling effect: When a person is more motivated to be productive in the

  presence of others, rather than alone at home.
- Git: Version Control
- Integrated Development Environment(IDE): Software application that provides

  facilities for software development.
- User Interface (UI): Visual elements of a software product.
- User Experience (UX): Overall experience and interaction a user has with a

  product.

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