# DigiDuniya

## Unoffended 2.0

Spring Semester 2022

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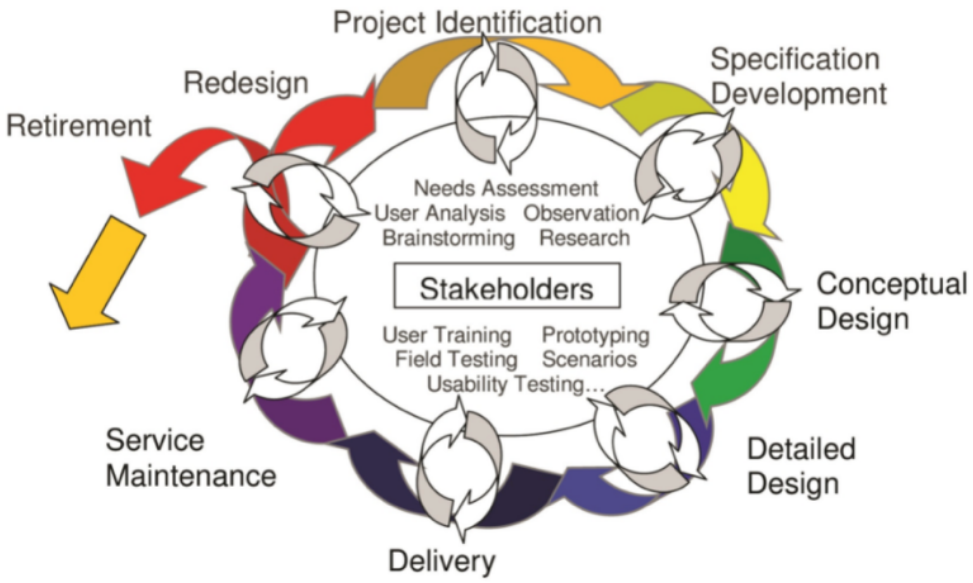


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# SECTION 1: PROJECT IDENTIFICATION

## TEAMS AND RESPONSIBILITIES

| Team Role/Week | Week 1-5 | Week 6-10 | Week 11-15 |
|---|---|---|---|
| **Project Manager** | Tushar | Suhani | Yash |
| **Project Archivist** | Atharva | Tushar | Abhigyan |
| **Resource Manager** | Suhani | Atharva | Tushar |
| **Communications** | Abhigyan | Yash | Suhani |
| **Operations** | Yash | Abhigyan | Atharva |

## BROAD PROBLEM STATEMENT

- **What is the gap that you are trying to address? (Future vs. Current Scenario)**

  “Digital Competence is both a requirement and a right of citizens, if they are to be functional in today’s society”. From the smallest of ages, we’re in contact with the digital world without any way to manage this. Phones and computers are as common as food and water but the proper know-how to go through this digital space evades not only young kids but even people of age who might not have had access to these technologies before.

- **How big/severe is the problem that you are working on?**

  Digital Literacy should be understood to mean the basic skill or ability to use a computer confidently, safely, and effectively, including the ability to use office software such as word processors, email, payment getaways, and presentation software, and the ability to create and edit images, audio, and video, and the ability to use a web browser and Internet search engines. From the above answer we can see that, if we are to thrive in today’s generation, digital literacy plays a very important role in navigating today's errands such as paying in a shop, ordering food or clothes online, calling a distant relative or sharing location through WhatsApp. Digital literacy is a growing part of any approach to skills development.

- **Who are your potential stakeholders/users? What are their needs that are not being met currently?**

  Our potential stakeholders include everyone who wants to be digitally literate and understand the basic applications and functions of Mobile Phones and Computers. In today’s scenario, if a parent/caretaker is not that digitally equipped, it becomes hard for the child to even do basic schoolwork. As a result, they end up going to different websites and consuming a variety of content and in the process, end up getting confused. As we are moving towards a more digital generation, the emphasis on digital literacy grows exponentially. When we did basic market research, we found that there is no compilation of resources where they start from scratch. When we google digital literacy, we find courses on basic computing. Nowhere did we find resources, where they have taught how to make Paytm ID and how to do KYC.

- **What are the blockers that are preventing users from meeting these needs?**

  The lack of a compact source of knowledge for people leads to them having to search tons of resources to get reasonable information. There are many compendiums for these topics however a single library of these modules can give people clarity on the fundamentals of traversing the digital space of their own accord.

## PROJECT SCOPE

- **What are going to be the project results? When the project is finished, what will be left behind by your team? What functionality is in-scope and should be part of the project at this time?**

  The project completion will result in an interactive portal that can be web-based/mobile application-based. Fundamentals of the digital space required can be incorporated in an interactive format for everyone. The portal will comprise tutorials, interactive quizzes, exercises, simulators, and documented information relating to trivial and essential topics in the digital space.
  Right now, we as a group have thought of making some basic models like digital identity, digital payment, efficient use of search engines, and how to use Microsoft tools. The model will be scalable and follow a common structure and further extensions can be how to convert one file to another, how to compress files, and how to pay and book cab services. For example, as soon as the users login they will be taught how to make an email account, which in turn will teach the users how to create strong passwords, how to double authenticate accounts using Mobile numbers and OTP, and how to send proper emails.

- **What assumptions has your team made?**

  In our everyday life, we run across people who find it difficult to access the digital space despite being in this technological day and age. This user base is spread across all age groups and there are very few resources that can efficiently explain this world properly. Some resources are offered by the Indian government however they are not user-friendly and mainly focus on computer courses which may not be of interest to someone who just wants to learn basic tasks. Throughout the country, this issue is prominent with the boom in access to affordable technology yielding people of all age groups without a compendium to properly understand this vast information that has suddenly become available.

## MARKET SURVEY

| Ability | Rural | | Urban | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| Able to operate a computer | 12.6% | 7% | 37.5% | 26.9% |

| | | | | |
|---|---|---|---|---|
| Able to use Internet | 17.1% | 8.5% | 43.5% | 30.1% |

Source: Ministry of Statistics and Programme Implementation 2019
https://sprf.in/digital-literacy-in-india-structural-constraints-and-the-nep-2020/

## STAKEHOLDERS

| Need | Stakeholders | Usage |
|---|---|---|
| 1 | Businesses | will use it to attract new customers and help improve their sales |
| 2 | Communities | benefit from this as it promotes economic growth and civic engagement. |
| 3 | Governments | who might be interested in promoting digital initiatives in the country |
| 4 | Users | of all ages, who might be interested in getting digitally literate. |

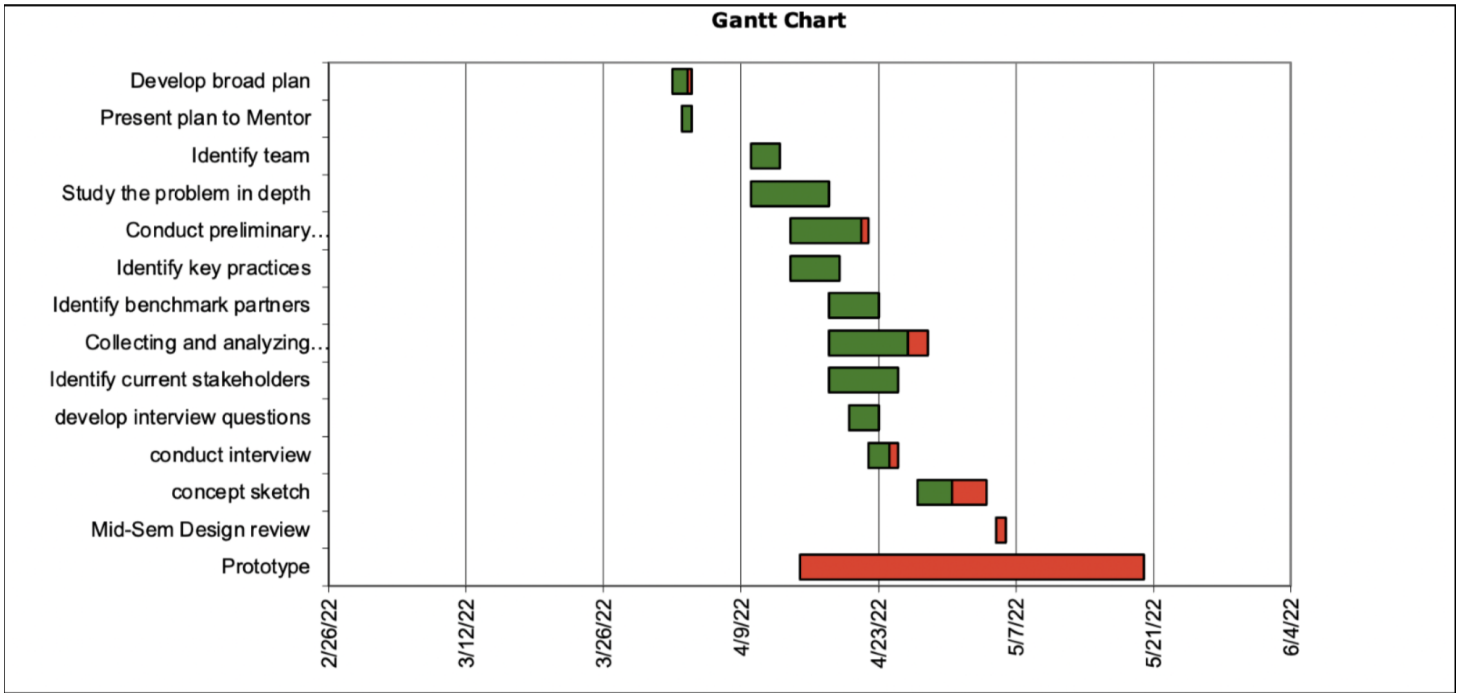
## USER NEED LIST

| Need | Stakeholder | User Need |
|---|---|---|
| 1 | User | The UI should be intuitive with more animated representation |
| 2 | User | Clear demarcations of topics<br>and the ease of navigation between them |
| 3 | Community | More concise information for all age groups |

| | | |
|---|---|---|
| 4 | **Ministry of Electronics and Information Technology** | Increasing awareness about the government initiatives to promote digital inclusivity and the application of digital world in the Indian context |
| 5 | **Business Leaders** | The ability to promote businesses and increase outreach as well as the user base by promoting knowledge on them |

## EXPECTED OVERALL PROJECT SCORE

**Project Start Date:** 2/04/2022 **Original Target Delivery Date:** 9/07/2022



# SECTION 2: SPECIFICATION DEVELOPMENT

## DESCRIPTION OF THE USE OF CONTEXT

- **How is the project going to be used, and how could it be mis-used (unintended consequences)?**
  The project can be used daily by every user from a portable device to obtain resources regardless of location and time constraints as long as they can access the internet.

- **What systems will the project interface with, and what are their requirements?**
  The project can be utilized on any portable device with a screen such as laptops or mobile phones. It requires an internet connection and a reasonable understanding of written language.

- **What are the limitations of the space the project will reside in for use and storage**
  - **Consider physical size, storage space, servers, ADA or other standards.**
    Web based servers will have to be used to store and retrieve data for the entire app as well as for handling the user base at the same time.

- **Who will maintain the project?**
  - **Consider site/application management, training, and access limitations.**
    The application management will be done by the developers i.e us and the training data and content can be done in collaboration with experts to compile reasonable information.

- **What are the environmental conditions?**
  - **Will the project be exposed to rain or sun?**
    The project is to be used remotely (mobile application/portal) and hence will not be exposed to violent environmental conditions.
  - **Will the project be exposed to the public or children who may damage it?**
    No, it cannot be damaged by exposure to users since it isn't a physical project.

- **What security issues need to be considered?**
  Hacking and privacy issues are issues that need to be fixed prior.

- **How durable does the project need to be?**
  The app can be developed further over and over to withstand new frameworks and developments.

- **What are the social/societal factors that may affect the project?**
  Poverty and the lack of education (reading ability) may hamper access to the app and can affect the ability to learn through it.

- **What are the technological limitations of the project?**
  The app may not be optimized for all devices and may need multiple versions to properly figure out a balance for it to work efficiently

- **What other factors may be important for this particular context? (e.g., economical, ethical considerations)**
  Economic divisions may be a factor in this as access might require a certain amount of income to purchase devices. Ethical factors can create complications in completing the modules without the actual learning in them and rather just finishing them for the sake of it.

## BENCHMARKING

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After conducting preliminary market research in the field, we discovered the following competitors:

1. **Learn My Way**
2. **GCF Learn Free**
3. **Tech Boomers**
4. **BBC WebWise**
5. **National Institute of Electronics and Information Technology**
6. **Digital Unite**

We discovered the following while browsing specific websites:

1. **None were Indian-centric and provided a comprehensive collection of information.**
2. **User interaction is minimal.**
3. **Less hands-on practice, more written information.**
4. **Was much more focused on computer fundamentals**

In India, there have always been a lot of misconceptions about digital literacy. People are still hesitant to use online payment services and prefer to use cash instead. Despite technical advancements and low internet costs, hardly one-fifth of the Indian population uses online services on a daily basis. We want to overcome all of this with this project. Our app stands out from the competition because it is:

1. **Users are engaged and interactive by being asked to complete activities and quizzes.**
2. **Very short and simply includes the most essential information.**
3. **Short modules cover more ground without becoming tiresome.**

| Features | Learn My Way | GCF Learn Free | BBC WebWise | NIEIT | Digital Unite | DigiDuniya |
|---|---|---|---|---|---|---|
| User Interactive | Middle | ✗ | ✗ | ✗ | ✗ | ✓ |
| Structure & Organization | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ |
| Diversified or Single Focus | Diversified | Diversified | Diversified | Single Focused | Diversified | **Diversified** |
| Country Centric | ✗ | ✗ | ✗ | ✓ | ✗ | ✓ |
| More Theory, Less Practical | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |

## SPECIFICATION LIST

| Need | User Need | Specification |
|---|---|---|
| 1 | The UI should be intuitive with more animation representation | Must have Easy Layout & Navigation |
| 2 | Clear demarcations of topics and the ease of navigation between them | Must be compiled with Animated Representation |
| 3 | More concise information for all age groups | Must be accessible for members from all age groups |
| 4 | Increasing awareness about the government initiatives to promote digital inclusivity and the application of it in the Indian context | Must help government to spread awareness regarding digital literacy |
| 5 | The ability to promote businesses and increase outreach as well as the user base | Must help businesses and local entrepreneurs to promote their sales |

# SECTION 3: CONCEPTUAL DESIGN

## OKRs AND KPIs

The OKRs and KPIs are divided into the following categories:

1. **Engineering:**

| OKR | KPI | Performance Indicators |
|---|---|---|
| Build the Mobile Application DigiDuniya | Construct the Structure of the Application | Build the Front Page and the Module on Email |

2. **User Experience:**

| | | |
|---|---|---|
| Making content available in more languages | Application Bilingual – English and Hindi Supported | Average daily users for each language (Hindi and English). 50% |
| Easy to use UI and engaging UX | Make the application non-intimidating and minimalistic | Average time spent on the application (user): half an hour. |

3. **Customer Acquisition:**

| | | |
|---|---|---|
| Effective Product Landing | Create a basic website educating the user about the app | Conversion rates from websites to app is 3% |
| Create good advertising content which will explain the benefits of digital literacy. | Create short videos which will be advertised on platforms such as Instagram | Conversion rates from videos to Landing page on website. 2% |

## SECTION 4: PROTOTYPE

- **What was the purpose of the prototype?**
  The goal of this prototype application is to help members from different age groups and diverse communities to assist them with technological usage and develop the necessary skills to use a computer confidently, safely, and effectively.

- **Was the concept built by the internal team or did you receive any help from any external partners?**
  This prototype / concept is totally built by our internal team without any constraints or input from any external partners for the process, so it is totally intended for internal use.

- **What simplifications were made?**
  These are the simplifications which are part of our product:

  1. The user interface was made very simple.
  2. The modules start from the basics and have a steady learning curve towards the advanced concepts. For example, The module on email will have the following lessons:
     a. What is an email?
     b. What is an email used for?
     c. Email Providers
     d. What does it look like?
     e. Quiz to check the knowledge.
     f. How to create a password.

- **How was the prototype fabricated?**

  The prototype was envisioned after brainstorming on features and the basic structure of the application. Our product is built using Figma. Here is an attached link of our content brainstorming:

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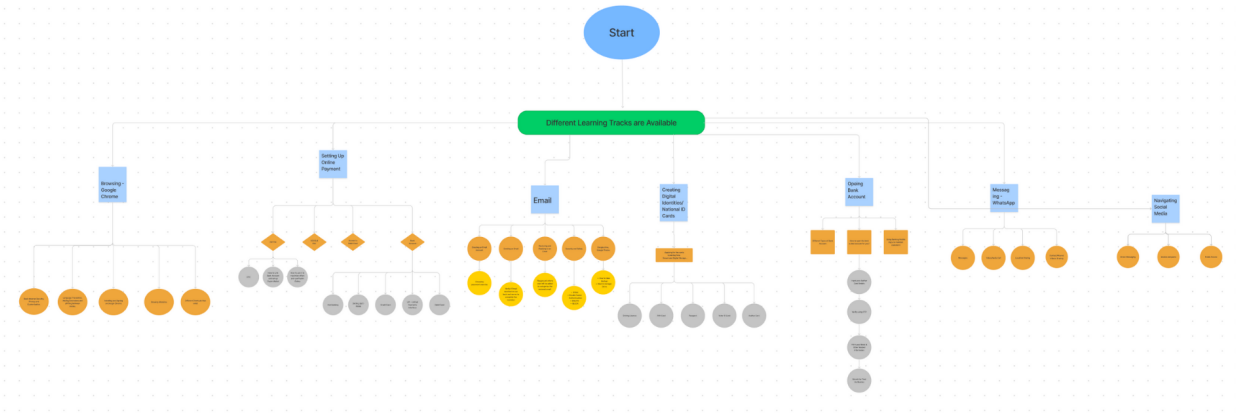


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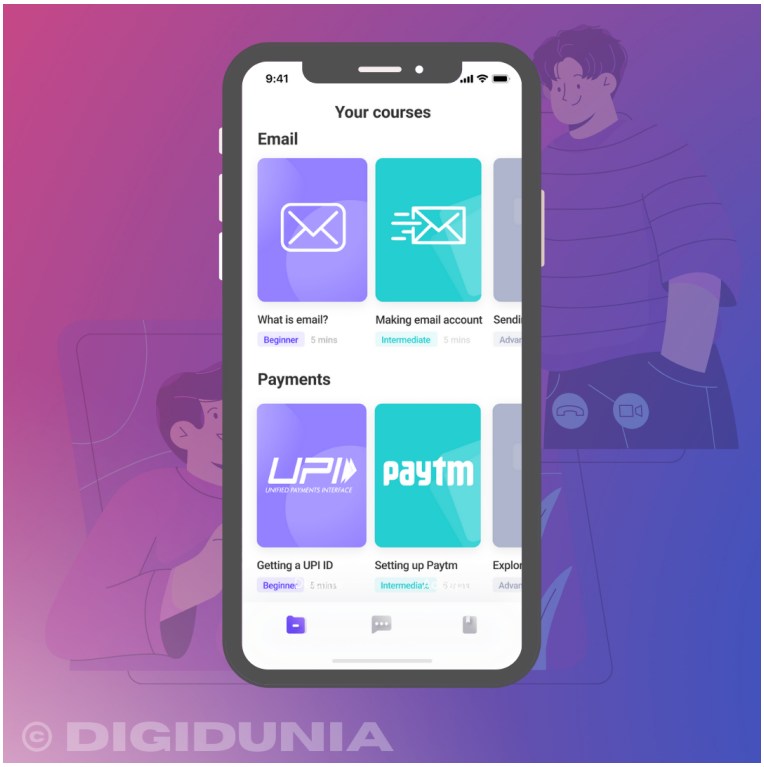
## FINAL PROTOTYPE RENDERINGS:


9:41
Your courses
Email
What is email?
Beginner 5 mins
Making email account
Intermediate 5 mins
Payments
UPI
UNIFIED PAYMENTS INTERFACE
paytm
Getting a UPI ID
Setting up Paytm
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# SECTION 5: TEST

## TESTING PROTOTYPE FEATURES

| Need | Specification | Verification |
|---|---|---|
| 1 | Must have Easy Layout & Navigation | We have a user-friendly UI and UX Design which enables easy & quick navigation |
| 2 | Must be compiled with Animated Representation | We have animated videos which are easily understandable for any individual |
| 3 | Must be accessible for members from all age groups | Our application has a bilingual model which fosters ease of understanding for individual of any age |
| 4 | Must help businesses and local entrepreneurs to promote their sales | With the understanding of digital world, businesses will able to accelerate their profits at a differential level |
| 5 | Must be a platform where Government can help to spread | Can be collaborated with multiple government bodies to promote awareness about digital literacy across various regions throughout the country |

## VALIDATION

1. **What is the foundation of your platform? What is your team's understanding of your concept?**

   We discovered that choosing to use a mobile application was the best decision we could have made, given the smartphone explosion in India. Almost every family in India now has at least one smartphone, making our mobile application concept easily accessible to everybody. Furthermore, because it is designed with Flutter, a single piece of code can be compiled to create an app for all five platforms, making it even easier for our development team to create an app that can support all of the platforms.

However, we needed to undertake development - user surveys to gain more information about whether or not this concept would be viable.

2. **What excited your user? What frustrated them?**

   With our application, we consulted more than 15 people and asked them how they felt about it, which parts needed development, and which would help them. Also, we heard that the User Interface (UI) looks great, and that the multilingual model will definitely benefit them, but that they would like some new colors with the app because it will make them more enthused. They also asked for a voice-over chatbot or voice assistant to be included into the app, which will be bilingual and able to assist without having to type on the screen.

3. **What decisions or changes to the design were made based on the results?**

   Following user validation, we updated the colors of our application and added a voice assistant feature to our "List of Prospective Features." Because adding a Chatbot with Natural-Language-Processing Model (NLP) will take some time, we've decided to put it on the list of prospective features and will be working on it throughout the next semester.

## CONCEPT CONVERGENCE

| Evaluation Methods | | | Options | | |
|---|---|---|---|---|---|
| | | | Hybrid / Mobile Pop-Up Programs | Online using Mobile App | Location-based Programs |
| **Problems that Users Encounter** | **3 / 5** | | **Score** | **Score** | **Score** |
| Navigation | 3 | x | 1 | 2 | 3 |
| Proper structure & organization | 5 | x | 2 | 5 | 3 |
| Country Specific | 3 | x | 3 | 3 | 3 |
| Less Theory, More Practical | 5 | x | 3 | 5 | 4 |
| Easy Access | 3 | x | 2 | 3 | 2 |
| | **Total** | = | **43** | **74** | **59** |

So, based on the results of the decision matrix, we chose to utilize an online-delivery mode for the employment of our project, rather than location-based programs or the hybrid mode, because it is easier to implement and will allow us to keep it world-ready at all times.

## PROPOSED SOLUTION

A language-sensitive step-by-step interactive learning program delivered via a mobile application is the method we offer. This could be accomplished through a broad platform that welcomes learners of different ages and regions. Learners would begin their digital literacy on the platform (which is now in the form of a mobile application) by learning the most fundamental skills, such as installing Gmail and sending an email. Modules on a variety of topics, such as email and UPI, would be stored on the platform. The learner can select the module they want to study based on their ability level and preferred topic. Short lessons, practice tasks, quizzes, and interactive doubt clearing sessions would be included in each module. The learner will be able to complete the module without feeling overwhelmed or scared thanks to the step-by-step method. The first lesson in the email module, for example, is What is Email? What is the purpose of email, the next lesson? Who are email providers? is the third lesson. The practice exercises would provide instant hands-on experience, while the quizzes would assess the learning output.

# SECTION 6: CURRENT SEMESTER RECORD

## POINT OF CONTACT FOR FUTURE TEAM MEMBERS

| | |
|---|---|
| **Name:** | Suhani Agarwal |
| **Email:** | suhani.agarwal@plaksha.edu.in |
| **Phone:** | +91.7044560248 |
| **Project Website:** | https://bit.ly/3NRxtcj |
| **Sharepoint Link:** | https://bit.ly/3aBrKZL |

## CURRENT PROJECT STATUS

This semester, in accordance with the provided solution, we brainstormed and developed a problem statement, namely, "the ability to use information and communication technologies to search, evaluate, produce, and convey information, needing both cognitive and technical skills." We devised a solution to this problem by creating a mobile application that will include videos with animations and fun quizzes on word processors, email, payment gateways, presentation software, editing software, and search engines, allowing people from various communities and age groups to become digitally literate. We created a Brainstorming Map on Figma for content development, where we built a map for several modules for the multiple actions that the user must do. And, for the prototyping phase, we've created a full-fledged mobile application with Flutter and Figma, as well as a few modules that have been incorporated into the app, culminating in a comprehensive mobile application with all necessary material called "DigiDuniya" - our semester's expected product. Now, because we may continue this project next semester, we've devised a timeline plan, which is outlined below.

**Execution Plan & Tentative Schedule:**

| Feature to be implemented | Tentative time required |
|---|---|
| Application UI Refinement & New Content Generation + Integration | 7 Weeks |
| First Alpha-Testing Rollout | 1.5 Weeks |
| First Alpha-Testing Rollout - Input Analyzing + According UI Refinement | 3 Weeks |
| Second Alpha-Testing Rollout | 1.5 Weeks |
| Second Alpha-Testing Rollout - Input Analyzing + According UI Refinement | 3 Weeks |

## TRANSITION REPORT

There's a lot of space for improvement and refining in this project which can be implemented across next semesters. We'll re-incorporate the Whole Systems Map approach in the next semester because we didn't find it to be a requirement this semester, but we believe it will be useful in the future when the project requires more input from all of the team members. We'll also try to widen the scope of this idea by using the Whole Systems Map, which may even reveal concerns we overlooked. There is also room for development in the application's User Interface; since this was the team's first time coding a mobile app, they were able to accomplish a lot of wonderful things, but once members have more hands-on experience, it will undoubtedly help the project the following semester. Furthermore, content generation will receive a significant boost next semester, as we have learned from this semester's experience that the team can be divided into two sub-teams, one working on content and the other on development, allowing progress in both directions while simultaneously updating each other. Finally, with this upscale strategy in place, we should be ready with our first alpha testing version for the testing rollout by the middle of the next semester.