UNIVERSITI TEKNOLOGI MALAYSIA

SECP1013 – Sec 04

TECHNOLOGY AND INFORMATION SYSTEM

PART 2 : LOW FIDELITY PROTOTYPE

LECTURER: Hairudin Bin Abdul Majid

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INTRODUCTION

Cloud backup, also known as remote backup, is sending a copy of your data or files to the remote server provided by the service provider in case a ransomware attack or disaster happens causing the data to be lost and cannot be retrieved anymore. Internet of Things(IoT) is a physical device that is embedded with software,sensors and other modern technologies to exchange data with other devices over the internet. In this report, we will introduce a cloud backup service as well as its reasons for implementing such as the problems that are currently faced for the plan to solve and the potential of the cloud backup services. The report will also include the general details of the architecture like textual descriptions, wireframe and flowcharts to help readers grasp on the contents of the report.

PROJECT DESCRIPTION

Problem statement

Humans collect data everyday on their mobile and desktop. In order to store the data, they have to do backup on their storage and it consumes space. Current data restoration and backup is efficient but it still needs to be done manually which means the user has to set up the backup copy and update the data needed for backup and restoration. Not everyone has the time or ability to remember to configure the backup settings. This will cause several problems where data is lost permanently and cannot be restored.

Solution

After extensive research about the problem faced by many users, we came up with an idea to solve this problem. We developed an application that will automatically backup the data and store the data needed with the configuration from the user. When the user needs to restore the data, they can log in into the application to restore the data with an easy to use interface.

Our objectives

This project is all about making the lives of our customers easier. While working on our project,we set a few objectives that we want to achieve with project :

1. To reduce the cost of production without sacrificing efficiency of the service and offer the lowest pricing possible to the customer.

2. To provide customers with a convenient way to backup and restore the data in case of disaster or ransomware attack happens making the data to be lost.

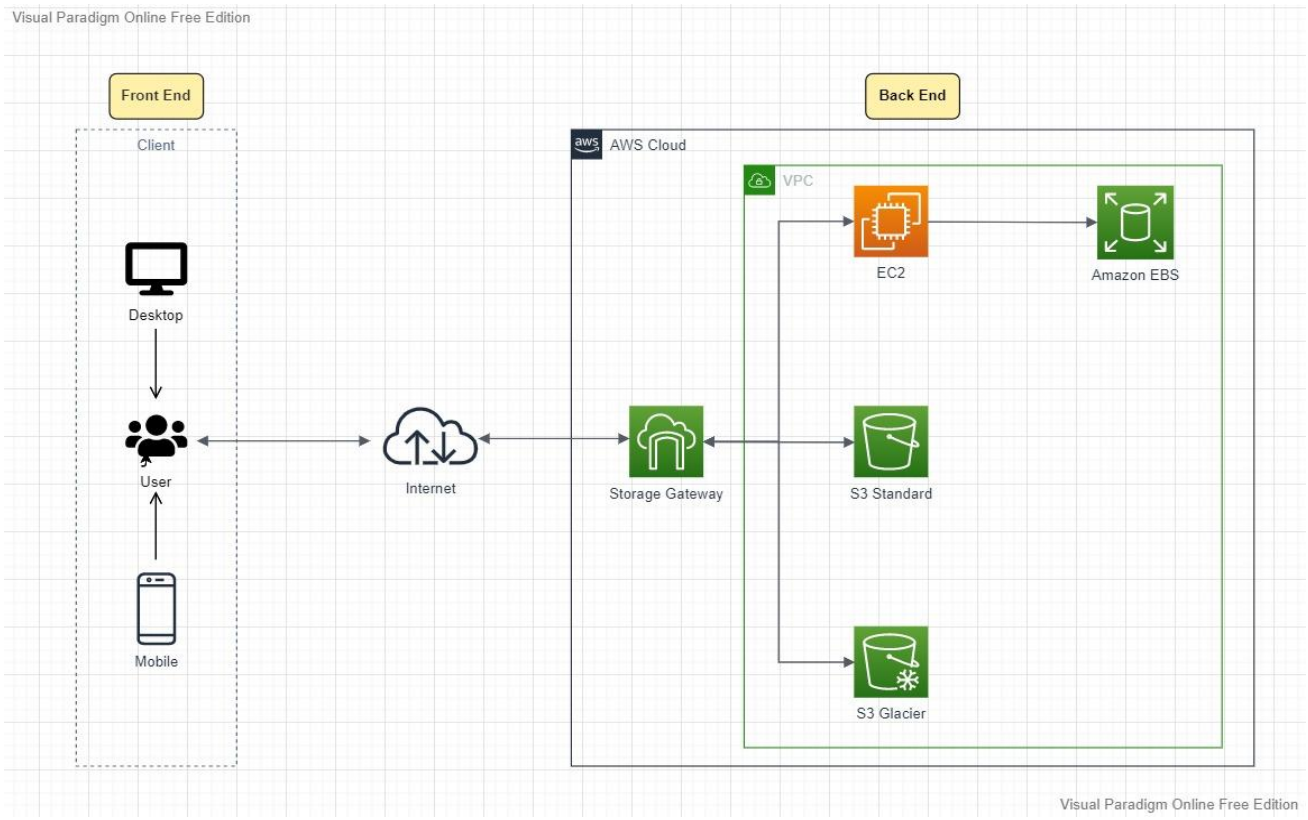
3. To provide customers with easy to access and secure data protection.

4. To provide a services that is affordable to all range of customers

Target client

This application is targeted to small and medium sized companies with tight budgets.In case of disaster or ransomware attack,the data will be lost and hard to retrieve. In order to avoid that, this service provides an easy way for the network administrator to restore the data in a matter of seconds. Other than that, individuals that deal with a lot of data, such as photographers, were also targeted by this service. Photographers often use cloud backup as their secondary storage option after the memory cards. In case the memory cards are lost or corrupted, photographers can go onto the service and easily restore the photos through their smartphones or computers.

AWS ARCHITECTURE AND DESIGN



Front End

This application is supported for both mobile and desktop. For mobile users, the system supports those who are using Android and IoS operating systems. Meanwhile for desktop, the system also supports MacOS and Windows 8 and above. To log into the system, users need to provide their email address and password in order to use the application. Other than that, users also need to have an internet connection to use the application.

Back End

For the back end section, we use Amazon Web Service(AWS) as our cloud service provider in implementing the application. There are variety of services that we use from AWS such as :

1. Amazon Storage Gateway

    - Amazon Storage Gateway connects the user with cloud-based storage to provide seamless integration with high data security of the user data. It allows us to deliver

low-latency data access to customers when using the application. Customers can get quick access to their data after logging into the application

2. Amazon EC2(Amazon Elastic Compute Cloud)

    - Amazon EC2 is one of the computing services provided by AWS. It provides a virtual machine that can host the application. It allows us to focus on improving the system and applications instead of investing on server,computing power and storage to store the users data.

3. Amazon S3 Standard

    - Amazon S3 Standard is one of the Amazon S3 Storage Classes. It can be used in a variety of use cases.It is used to store data that is frequently used. For instance, Amazon S3 Standard is perfectly used for photographers who deal with a lot of data by taking pictures and will access the data soon after the process is over.

4. Amazon S3 Glacier

    - Amazon S3 Glacier allows the user to store data that is not frequently used and may need to use it again in 5 or 10 years in the future. It is a secure,durable and low cost storage class for data archiving. Small or medium businesses can use this service to store their data and use it again in 5 or 10 years in the future.

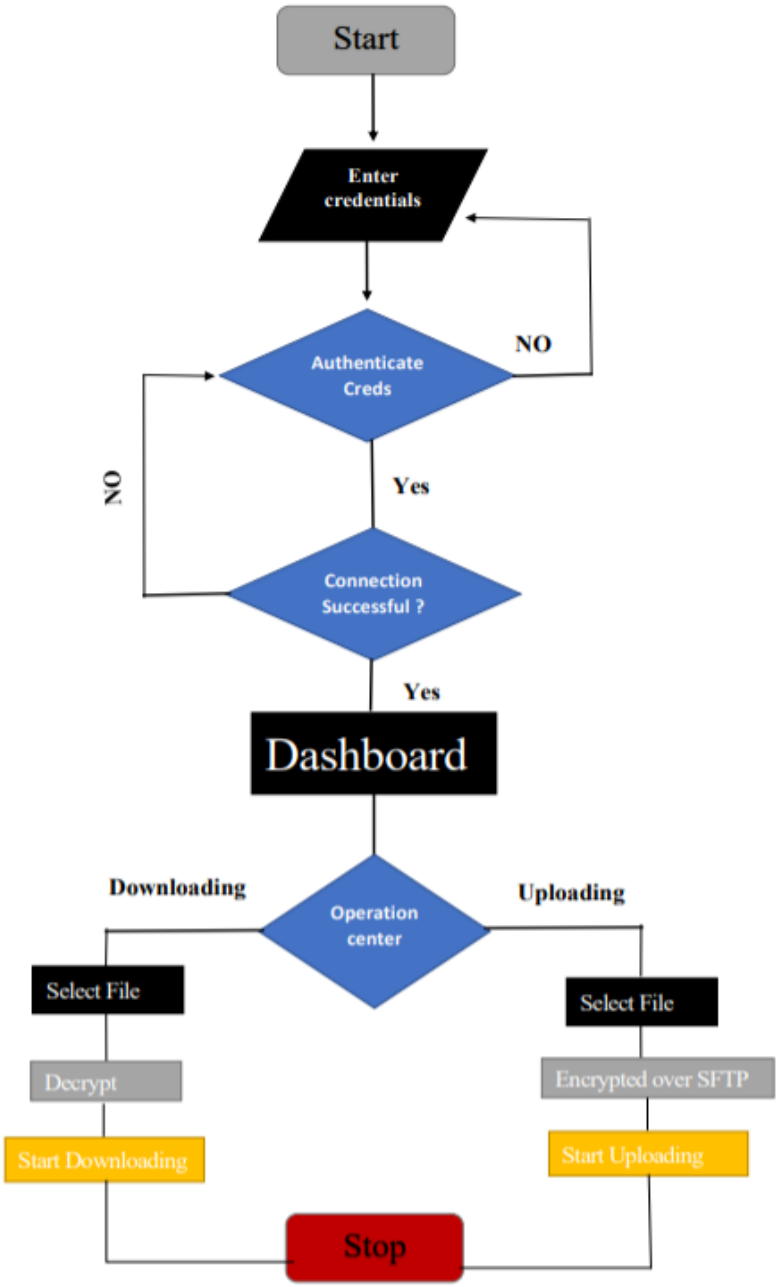
5. Amazon VPC(Amazon Virtual Private Cloud)

    - Amazon VPC is one of the security measures that are implemented into the system to secure the data and browsing experience of our customers in the AWS cloud. It enables us to define a virtual network in our own isolated area in the AWS cloud. It works the same as Virtual Private Network(VPN) but only works in the AWS cloud.

6. Amazon EBS(Amazon Elastic Block Store)

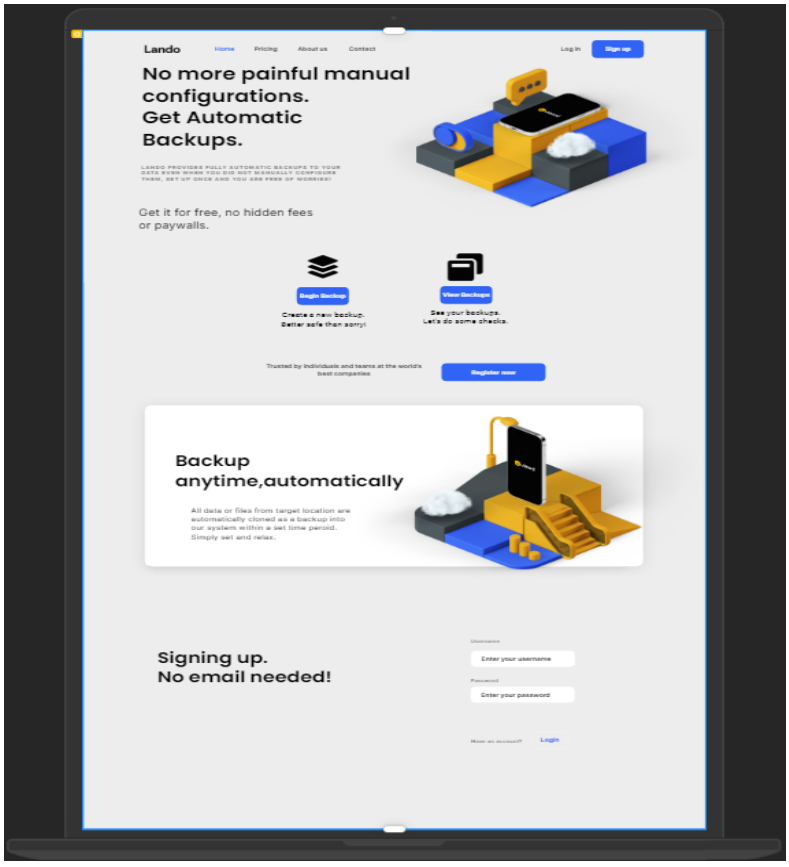
    - Amazon EBS is one of the storage services provided by AWS with a variety of volume types that provides persistent block level storage volumes to use with EC2 instances.It usually used as the primary storage to store data that require long-term persistence and must be accessed quickly. It is suitable for photographers who need to access the photos quickly and may need to access it again in the future.

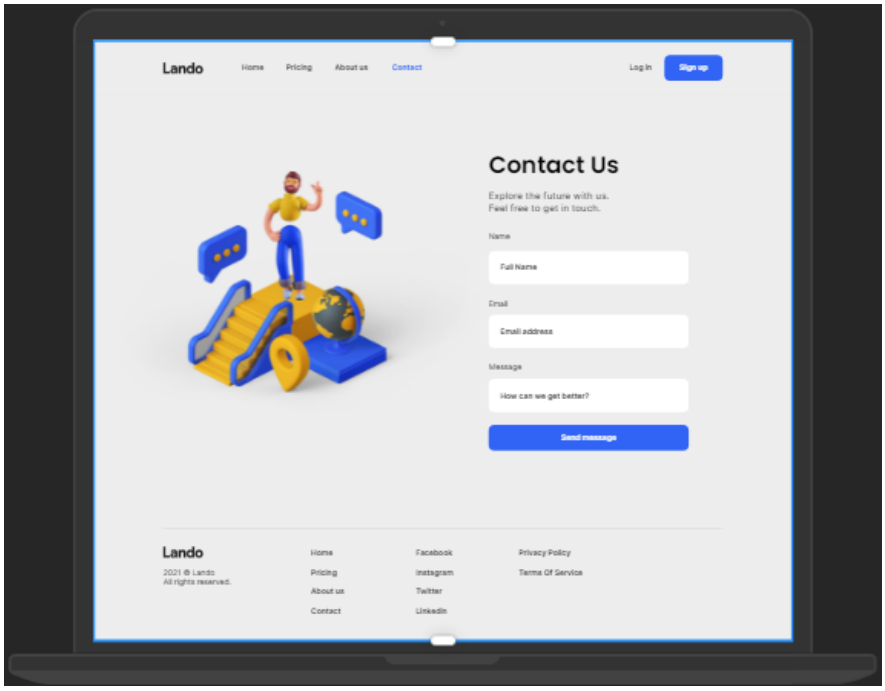
BUSINESS PROCESS FLOW DIAGRAM



LOW FIDELITY MOCK-UPS

We first planned to use Justinmind to create the prototype for our project, but after some consideration due to an issue experienced by our group which is we are unable to share the link to create the prototype together, we decided to switch to Uizard to continue our work on the prototype. We get to share the project's link to the team member and we can do it together.

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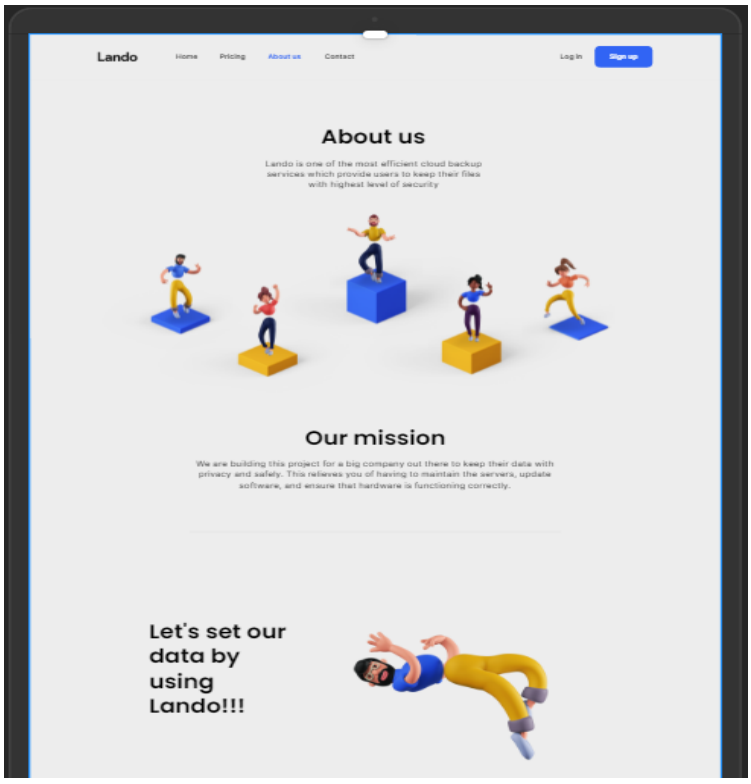
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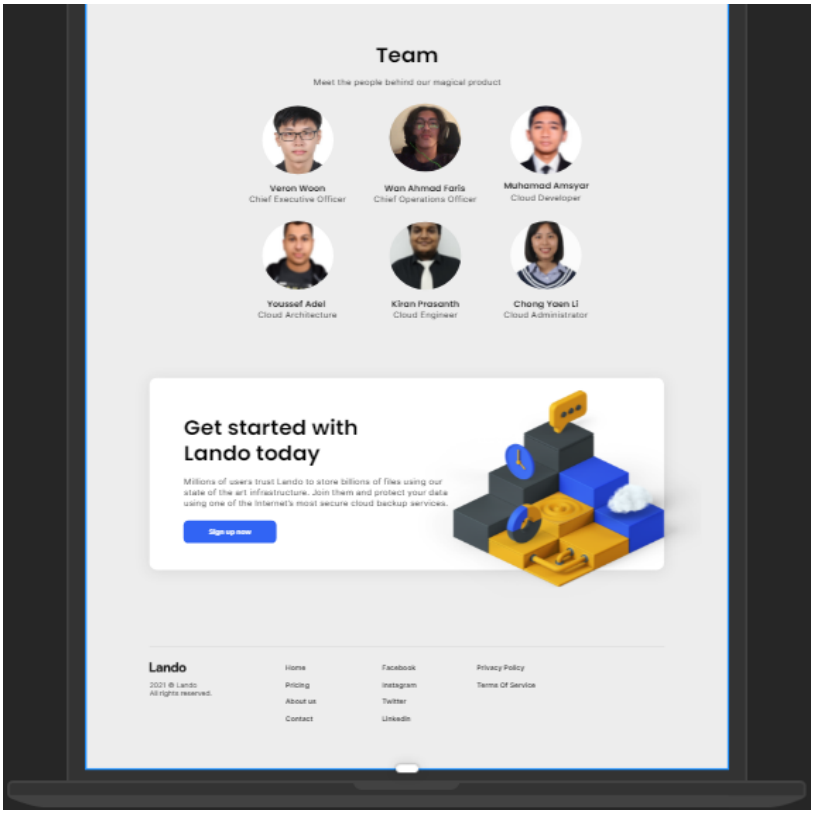
About us
Lando is one of the most efficient cloud backup services which provide users to keep their files with highest level of security
Our mission
We are building this project for a big company out there to keep their data with privacy and safety. This relieves you of having to maintain the servers, update software, and ensure that hardware is functioning correctly.
Let's set our data by using Lando!!!


Team
Meet the people behind our magical product
Veron Woon
Chief Executive Officer
Wan Ahmad Faris
Chief Operations Officer
Muhamad Amsyar
Cloud Developer
Youssef Adel
Cloud Architecture
Kiran Prasanth
Cloud Engineer
Chong Yaen Li
Cloud Administrator
Get started with Lando today
Millions of users trust Lando to store billions of files using our state of the art infrastructure. Join them and protect your data using one of the Internet's most secure cloud backup services.
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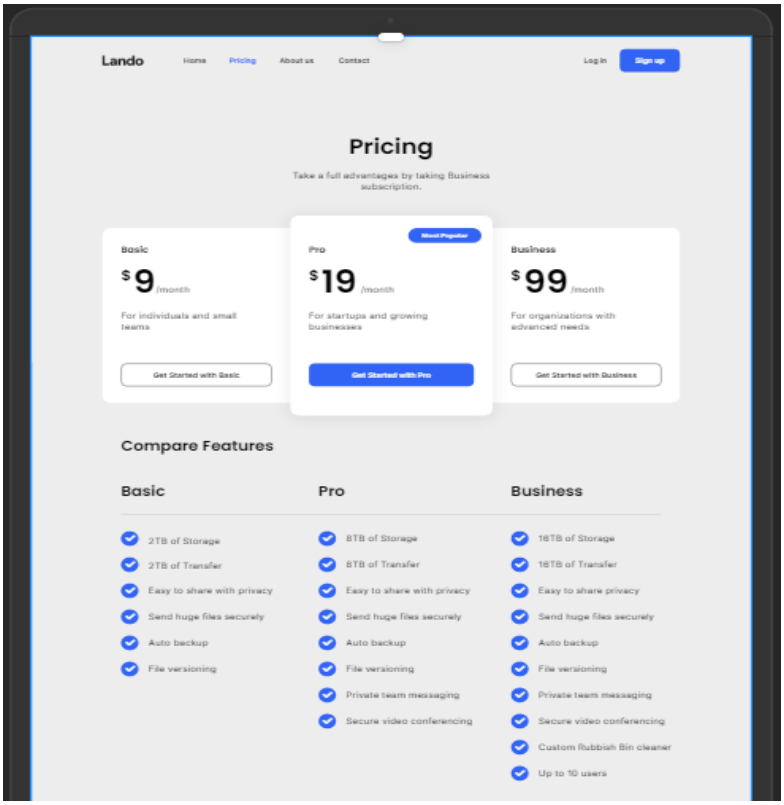
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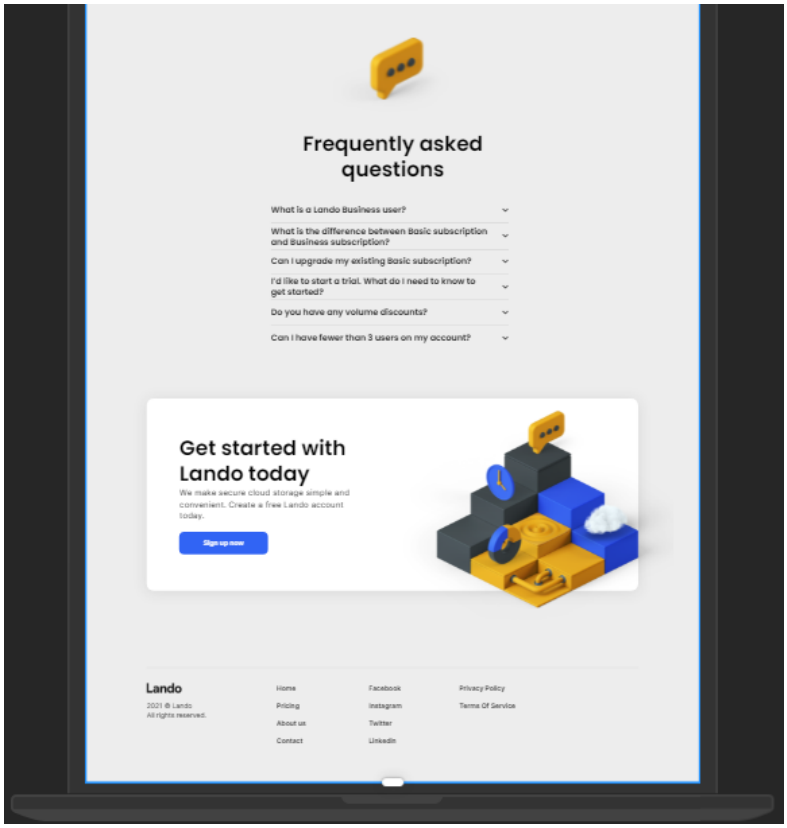
2TB of Transfer
Easy to share with privacy
Send huge files securely
Auto backup
File versioning
Pro
8TB of Storage
8TB of Transfer
Easy to share with privacy
Send huge files securely
Auto backup
File versioning
Private team messaging
Secure video conferencing
Business
16TB of Storage
16TB of Transfer
Easy to share privacy
Send huge files securely
Auto backup
File versioning
Private team messaging
Secure video conferencing
Custom Rubbish Bin cleaner
Up to 10 users


Frequently asked questions
What is a Lando Business user?
What is the difference between Basic subscription and Business subscription?
Can I upgrade my existing Basic subscription?
I'd like to start a trial. What do I need to know to get started?
Do you have any volume discounts?
Can I have fewer than 3 users on my account?
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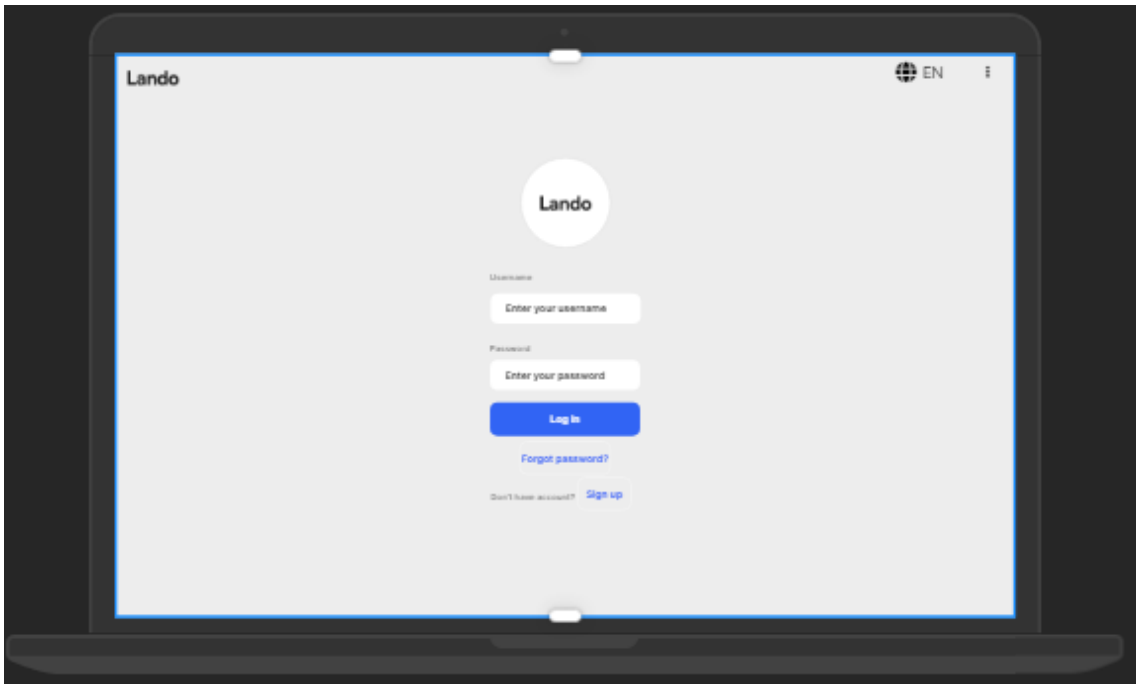
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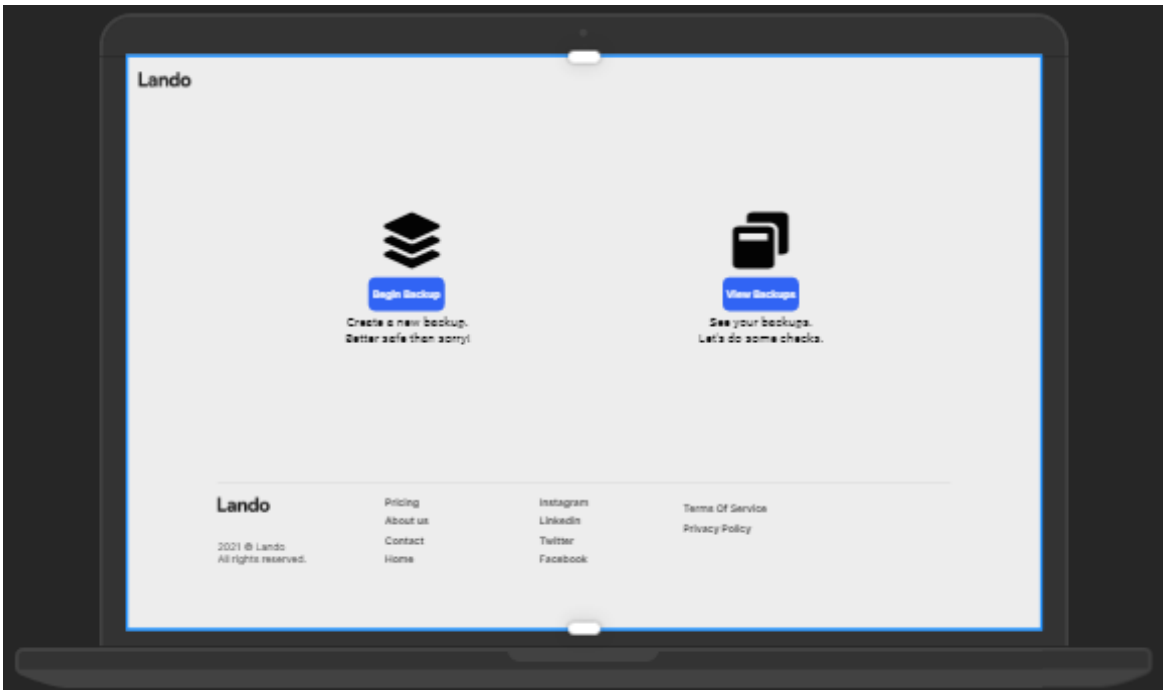
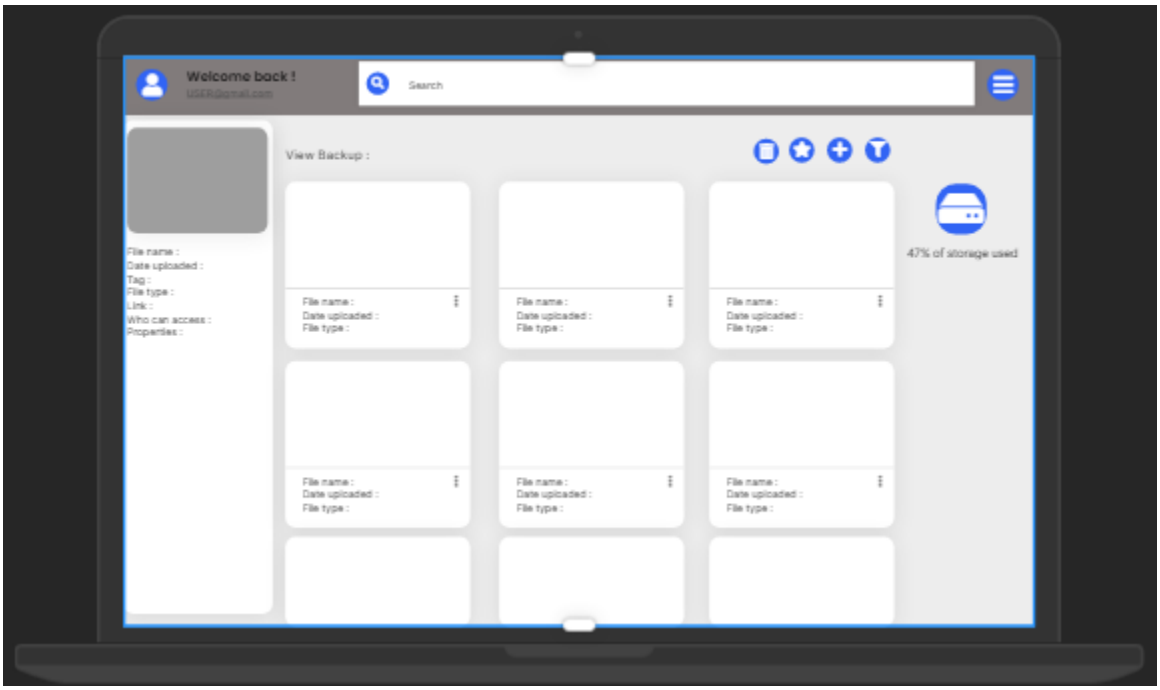
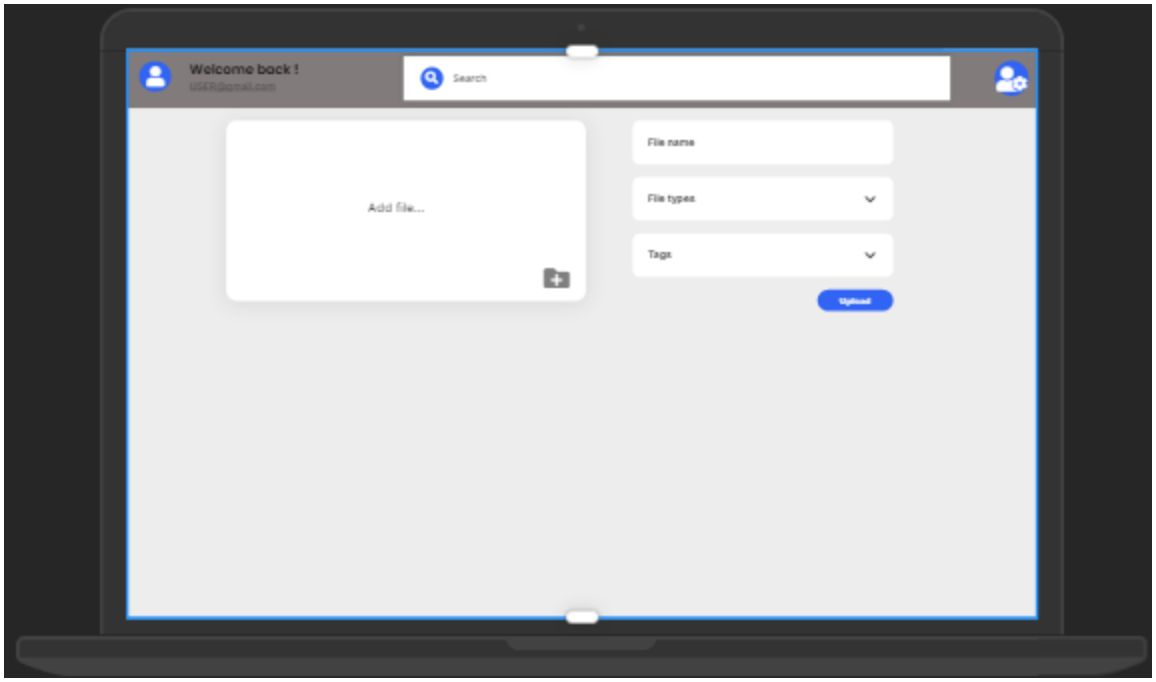


After successfully login into the application



Home page



Uploading file

REFLECTION

a. What have you learned and your motivation to complete this project?

Throughout my journey completing this project, I have learned many things.From this project, I managed to understand more about technology, especially in Cloud Computing, AWS Architecture and learned how to use a variety of necessary tools to make a prototype of our project such as Justinmind and Uizard. Apart from that, I also get to improve my skills to work in teams in completing a project and also get to know my team members better. My motivation to complete this project is to broaden my knowledge in technologies and become a global citizen to help humans to improve the way we use technology in our daily lives as technology is becoming a part of our daily lives.

b. What issues and solutions are implemented to make the project a success?

One of the issues that we faced to make this project a success is that the application is only accessible when the user has an internet connection which means that they cannot upload or backup their data when they do not have an internet connection. After extensive research and discussion among team members about the issue, we were able to come to a solution to solve this issue by continuing the backup or restoration process automatically after the user has a stable internet connection. What this solution means is that the user can backup their data offline and the backup process will start when they have an internet connection.

c. What is your direction after completing this project?

After completing this project, my direction is to continue to further educate myself with knowledge about technologies and also AWS Architecture as to adapt and be prepared to face the Fourth Industrial Revolution and ever changing technologies as they are evolving each day. Apart from that, I will also continue to work on this project as it also needs improvement to give the best experience to the user and become updated with trends to stay relevant with time.

d. What is the improvement necessary for us to improve our potential in the industry?

In terms of the improvements required for us to improve our industry potential, we must stay up to date with current industry trends, since technologies change and develop with time. In order to achieve that, we must hone our abilities and broaden our knowledge about technology, as there is still plenty to learn in this world.