

Department of Technical Education

Capstone project

Document CIE-2

Capstone project Name: Smart Pigmy Collection

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Description of technology used

- **Web technology**

A place connected to the internet, where a company, organization, etc. Puts information that can be found on the World Wide Web.

Types of websites

- Browsers
- HTML and CSS
- Programming Languages
- Frameworks
- Web Servers
- Databases
- Protocols
- Lastly, data Formats

Advantages

- We can access from any location.
- No data loss.
- Data can be recovered.
- Be available every time.
- We can save time.

- **Cloud based technology**

To live the project we need to purchase cloud sever.

Cloud based technology is the use of software and services via the internet. These applications commonly include data storage, networking, servers and databases. User can access their cloud hosted tools with any device that is connected to the internet.

- **Types of Cloud Computing:**

- a) SAAS:- Software as a Service.
- b) PAAS:- Platform as a Service.
- c) IAAS:- Infrastructure as a Service.

Advantages

- Usability and accessibility
- Security
- Cost efficient
- Convenient sharing of files
- Automation

- **Open-Source web technology**

For our project we not require to purchase any software's and libraries.

- **XAMPP**

XAMPP is a cross-platform and open source tool, which makes it an ideal choice of web developers. It is the acronym of X-cross platform, Apache, MySQL, PHP, and Perl.

- **PHP**

PHP is an open source scripting language used for creating dynamic and interactive web pages and various digital platforms.

- **PhpMyAdmin**

PhpMyAdmin is an open source and free administration tool for MySQL

- **Advantages**

- Community-Driven Reliability
- Community-Driven Security
- Low Cost on an Ongoing Basis
- Better, Community-Based Collaboration

Details of Hardware devices

- **Processor:-**

The processor is a chip or a logical circuit that responds and processes the basic instructions to drive a particular computer. We have used average I3 processor. The core i3 processor is available in multiple speeds, ranging from 1.30GHz up to 3.50GHz and features either 3 MB and 4 MB of cache. Core i3 processor are found as dual-core having two cores.

- **Types of processor**

- **Microprocessor**

The general-purpose processors are represented by the microprocessor in embedded systems. There are different varieties of microprocessors available in the market from different companies.

- **Microcontroller**

The microcontroller is basically a computer that comes in various packages and sizes. The reading input and responding to output is the basic function of the microcontroller.

- **RAM**

Random access memory. It is one of the part of the main memory, also known as read write memory. Random Access memory is present on the motherboard and the computers data is temporarily store in RAM. We have used average RAM of 2GB to 4GB.

- **Types of RAM**

- **SRAM(Static Random Access Memory)**

SRAM is used for cache memory, it can hold the data as long as the power availability is there.

- **DRAM(Dynamic Random Access Memory)**

DRAM is used for the main memory, it has a different construction than SRAM, and it used one transistor and one capacitor which is needed to get recharged in milliseconds due to the presence of the capacitor.

- **Advantages**

- High speed
- Temporary memory (volatile)
- Faster than secondary storage
- Fastest type of memory in a computer.
- Consumes less power compared to disk drives hence increasing battery life.

Details of software products

Software products we have used in our project

- **PHP designer**

PHPDesigner 8 is a fast and powerful PHP IDE and PHP editor with fill-blown HTML5, CSS3 and JavaScript built-in editors. Highly customizable IDE with intelligent syntax highlighting, debug support, syntax analysing support for object-oriented coding.

- **VS Code**

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft with the electron Framework, for windows, Linux and macOS. Features include support for debugging, syntax highlighting.

- **XAMPP Server**

XAMPP is a cross-platform and open source tool, which makes it an ideal choice of web developers. It is the acronym of X-cross platform, Apache, MySQL, PHP, and Perl.

- **Operating System**

An operating system is system software that manages computer hardware and software resources, and provides common service for computing programs.

- **Types of OS**

- Batch Operating system
- Time-sharing operating system
- Distributed operating system
- Network operating system
- Real-time operating system

- **Browser**

A browser is an application program that provides a way to look at and interact with all the information on the World Wide Web.

- **Types of browser**

- Internet explorer
- Mozilla Firefox
- Google chrome
- Safari
- Microsoft edge

Programming Languages

- **HTML**

The hypertext markup language or HTML is the standard markup language for documents designed to be displayed in a web browser. It is often assisted by technologies such as CSS and scripting languages such as JavaScript.

Advantages

- It is easy to learn.
- Every browser supports HTML Language.
- HTML is light weighted and fast to load.
- HTML has many tags and attributes which can short your line of code.

- **CSS**

Cascading style sheet is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web.

Advantages

- Helps in making creative web pages by making them simple to use.
- Improve the browsing speed.
- It can be used on various devices.
- Wider variety of design options.

- **JavaScript**

JavaScript is a scripting language that enables you to create dynamically updating content, control multimedia, animate images, and pretty much everything else.

Advantages

- Fast speed
- Easy to learn
- Versatility
- Popularity

- **Bootstrap**

Bootstrap is a free and open source CSS framework directed at responsive, front end web development. It contains HTML, CSS and java script based design templates for forms, buttons, navigation, etc.

Advantages

- Open source
- Easy to use
- Save lots of time
- Compatible with browser

- **PHP**

PHP hypertext preprocessor is a widely used open source general purpose scripting language that is especially suited for web development and can be embedded into HTML. PHP pages contains HTML with embedded code.

Advantages

- It's open-source and free from cost.
- It is platform-independent.
- It has less learning curve because it is simple and straightforward to use.
- It helps in managing code easily.

Description of the components in the system

- **Admin/bank login**

Here admin can login to the form using admin username and password. After logging in he can add the pigmy collector, he can add or delete customers or pigmy collectors.

- **Manage pigmy collection**

After admin logged in to the form admin can easily manage the accounts he had added. He can add or manage the pigmy collection.

- **View pigmy collection**

Admin can also manage or view the pigmy collection using username and password.

- **View customer**

Customer can login using their valid details. Also he can view its payment details using username and password.

- **View payment**

Customer can view payment details using their valid details and also admin can view the payment history.

- **Pigmy collector login**

Pigmy collector can login to the form using username and password and he can also add the customers.

- **Add Customer**

Pigmy collector adds the customers using their correct details and he can also update the customers details regularly.

- **Add payment**

Pigmy collector can add payment and payment details using valid details and he can update the payment history.

- **Customer login**

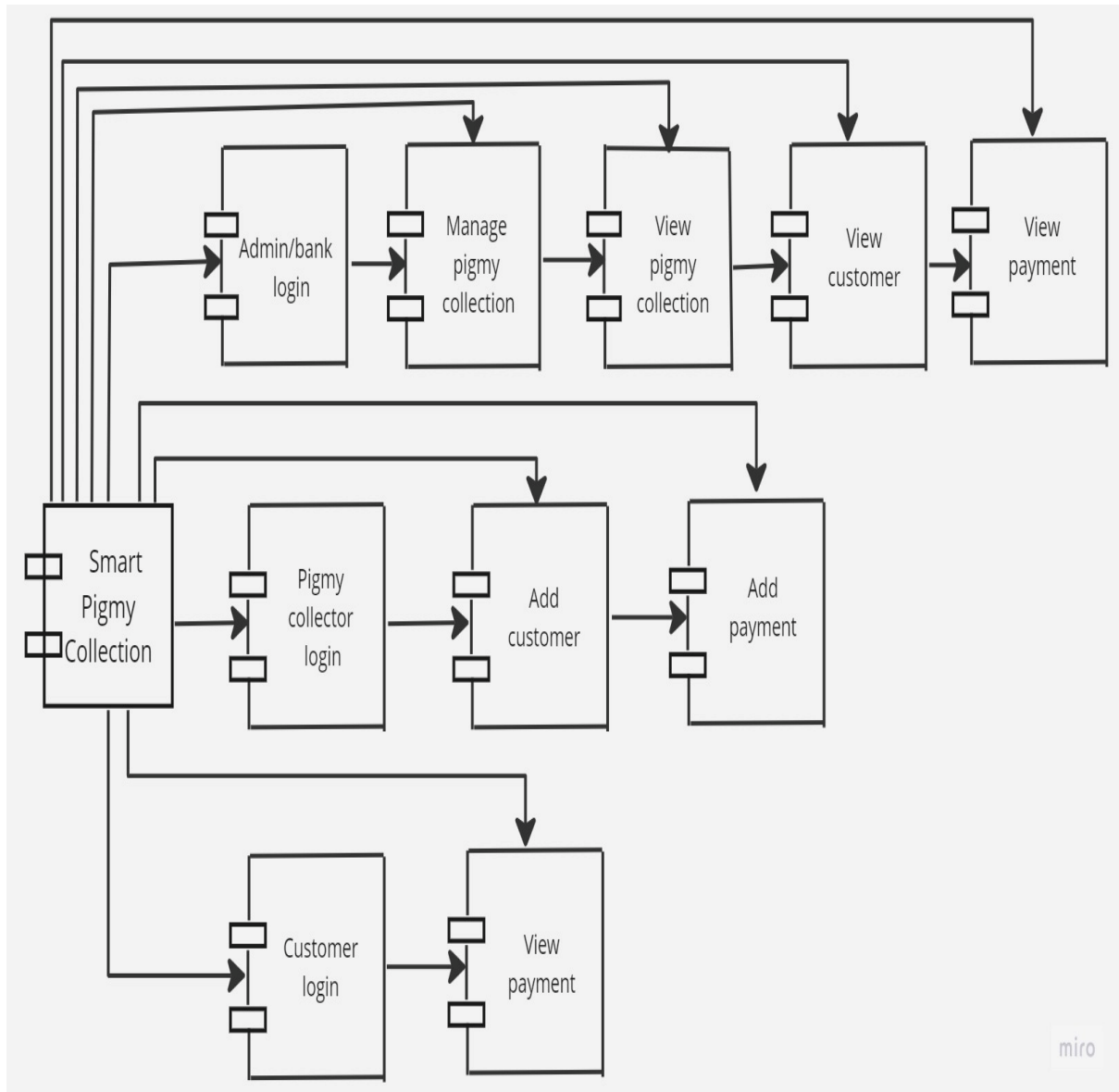
Customer can login to the form using username and password and he can also view the payment details.

- **View payment**

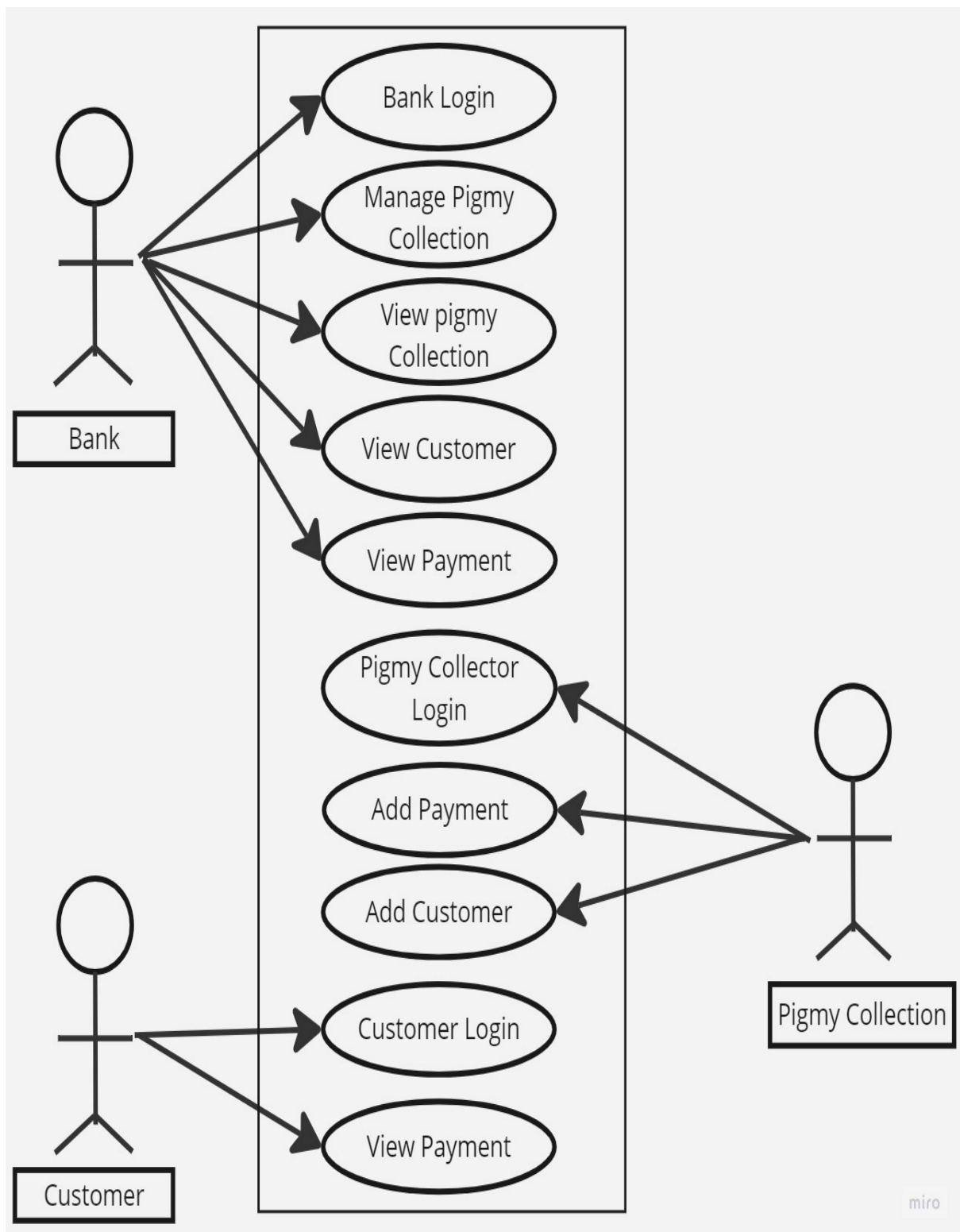
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Component diagrams and required design if any

Component diagram



Use Case



Construction or Fabrication details

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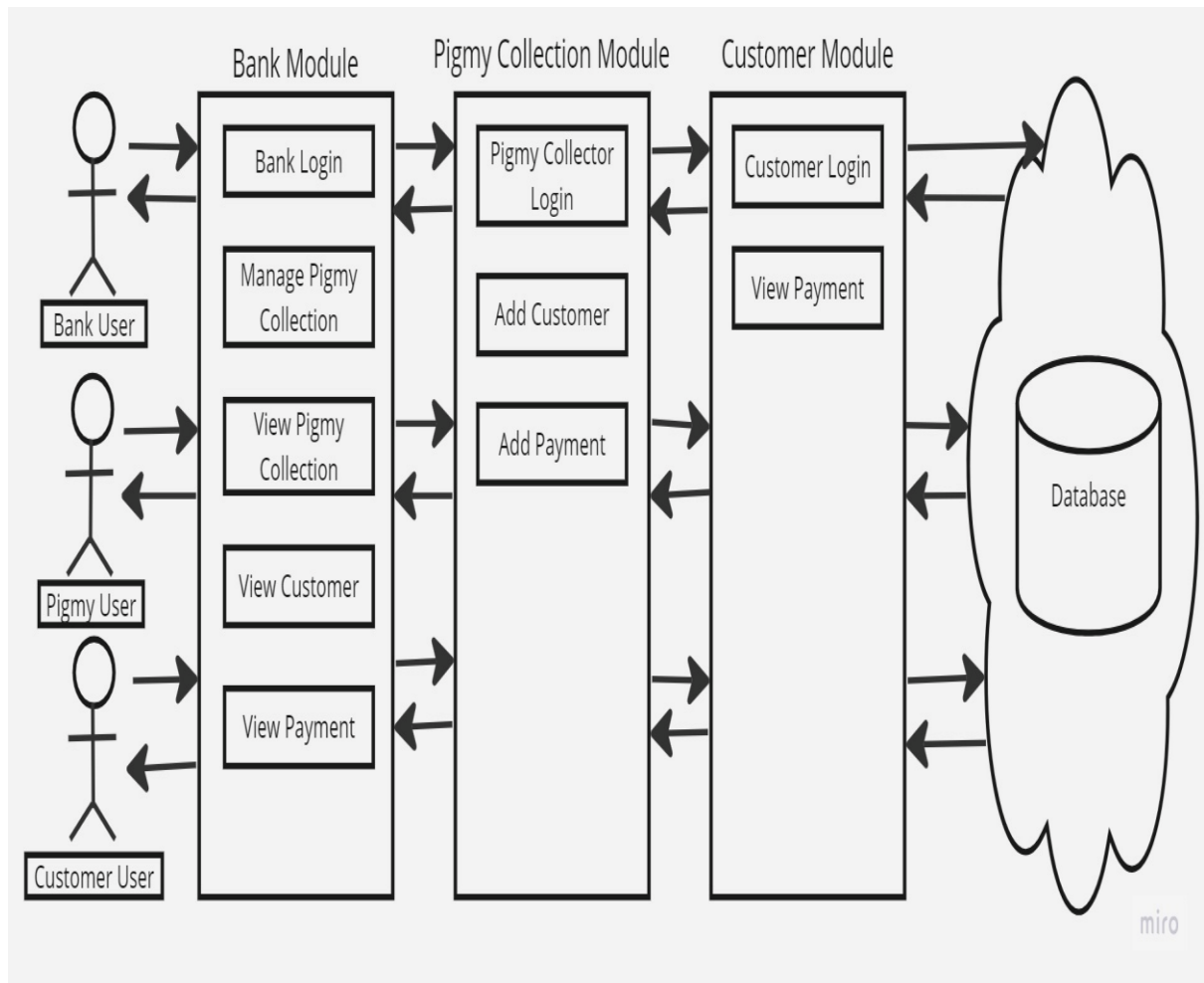
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System Architecture Diagram



Any other information needed to execute the Capstone project

- **XAMPP Server**

XAMPP is a cross-platform and open source tool, which makes it an ideal choice of web developers. It is the acronym of X-cross platform, Apache, MySQL, PHP, and Perl.

- **Steps to run program using XAMPP Server**

1. Open XAMPP Server control panel.
2. Start apache and MySQL service.
3. Minimize the windows.
4. Open browser.
5. In URL address bar type root folder name with local host (local host/cbkhotel).

- **To live the program on cloud server**

1. Purchase web domain name and cloud hosting server from any software company.

After purchase using username and password login to the cloud server and configure the project.

Signature of the Cohort owner