

### Task 1.1

Pinterest, founded in 2009, is a social network that allows users to share visuals of their interests and interact with other people's visuals. Some shared interests are food, fashion, well-being, financial independence, and programming. Interests can be shared on the social network using different kinds of media called pins. The main goal of Pinterest is to allow users to share and find ideas to spark inspiration and creativity. On Pinterest, users can save their pins in groups called boards. Users can discover pins either by searching or on a personalized page called a home feed.

As of 2022, Pinterest is reported to have 2545+ employees. Also, as of 2021, Pinterest had 478 million+ active users, 240 billion saved pins, and 5 billion+ boards. Their target market is everyone. Pinterest has 22 different departments serving the company.

### **OPERATIONS**

At Pinterest, employees work to give users the best experience. The employees make sure that their product meets the needs of their users. Some employees are in charge of the software engineering aspect of the company. Some employees are in charge of handling financial transactions of the company. The company works at providing opportunities for creators all around the world so they can showcase their pins to a larger audience. There are also sales and legal operations. Employees work on different projects for the growth of the company. When a project is initiated, the company sends a one-time payment for its budget.

The activities of Pinterest users are widely ranged. Pinterest users are either business accounts or personal accounts. Business accounts are like personal accounts with additional functionalities. Also, business accounts users do not usually have direct contact with employees

unless through customer service. A Pinterest user will browse through their home feed. If they see a pin, they like they can save it to a board. Pinterest boards are usually arranged according to interests so other users can easily find a collection of interests they like and are created by individual users. Apart from saving pins, Pinterest users can create pins so that other users can view them. Pins can either be normal pins or idea pins. Normal pins can only be pictures however idea pins can be of multiple media formats. The created pins are arranged in boards.

## **REASONS FOR THIS PROJECT**

Pinterest requires a database because they want to keep data on their users and employees. Also they want to be able to make projections about the growth of their company using the data stored.

The database will:

1. Determine the number of employees in a department
2. Keep record of projects and employees working on those projects
3. Keep record of Pinterest users and account information
4. Keep record of all pins and information on the pins
5. Associate a pin with a particular interest
6. Keep record of all boards and information on the boards
7. Retrieve records of payments company makes
8. Get all pins that a user has saved and created
9. Get all boards a user has created

10. Retrieve information on customer service complaints

### Task 1.2

#### **Strong Entities**

Employee – firstName, lastName, Ssn, email

Department – departmentName, departmentDescription

Pin – title, pinDescription, scheduledDate, destinationWebsite

Board – boardName, boardPrivacy, description

Pinterest User – firstName, lastName, username, email, gender, dateOfBirth,  
dateOfJoining

Project – projectName, projectDescription, projectBudget, projectCommencementDate,  
paymentDate

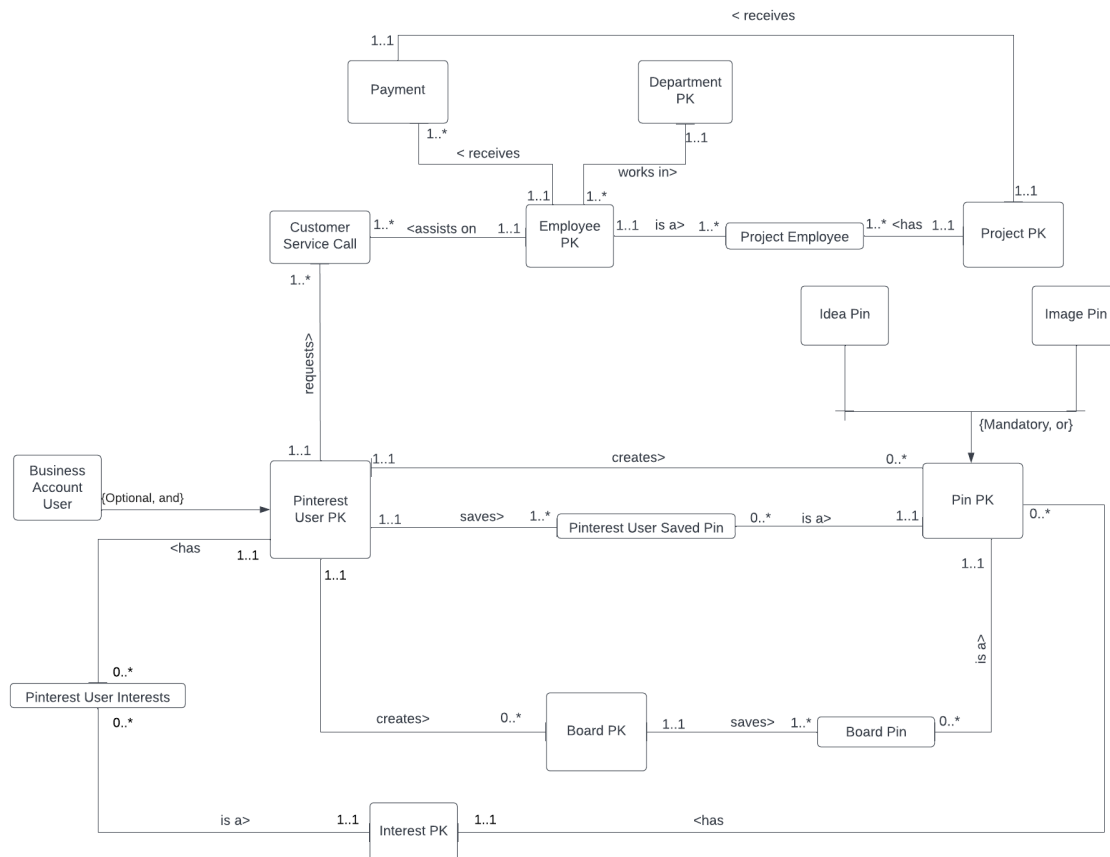
Interest – interestName, interestDescription

#### **Weak Entities**

Customer Service – dateOfCall, complaint, resolved

Payment – accountName, accountNumber, moneyTransferred

## EER DIAGRAM FOR PINTEREST DATABASE



### Assumptions

1. A project receives exactly one payment for its budget.
2. Pinterest is mainly for creating and viewing pins
3. All bank accounts are from the same bank

## **Enterprise Rules**

1. Project receives exactly one payment and Payment is received by exactly one project.
2. Employee receives exactly one or more payment and Payment is received by exactly one employee.
3. Employee works on exactly one or more project and Project is worked on by exactly one or more employee.
4. Employee assists on exactly one or more customer service call and Customer service call is assisted by exactly one employee
5. Pinterest user requests exactly one or more customer service call and Customer service call is requested by exactly one pinterest user.
6. Pinterest user creates zero or more pin and Pin is created by exactly one pinterest user.
7. Pinterest user saves zero or more pins and Pin is saved by exactly one or more pinterest user.
8. Pinterest user has zero or more interest and Interest has zero or more pinterest user.
9. Pinterest user creates zero or more board and Board is created by exactly one pinterest user.
10. Board saves zero or more pin and Pin saved in exactly one or more board.
11. Pin has exactly one interest and Interest is had by exactly one or more pin.

### Task 2.1

Employee (**employeeId**, firstName, lastName, Ssn, email, *departmentId*)

Department (**departmentId**, departmentName, departmentDescription)

Pin (**pinId**, title, pinDescription, scheduledDate, *userId*, *interestId*)

Specialized: Image Pin(**pinId**, altText, website)

Idea Pin(**pinId**, noOfPages, mediaType)

Board (**boardId**, boardName, boardPrivacy, description, *userId*)

PinterestUser (**userId**, firstName, lastName, username, email, gender, dateOfBirth,  
dateOfJoining)

Specialized: BusinessUser(**userId**, about, accountType, website)

Project (**projectId**, projectName, projectDescription, projectBudget,  
projectCommencementDate, accountName, accountNumber, moneyTransferred, paymentDate)

Interest (**interestId**, interestName, interestDescription)

CustomerService (**customerServiceCallId**, dateOfCall, complaint, resolved, *employeeId*,  
*userId*)

Payment (**paymentId**, accountName, accountNumber, moneyTransferred, paymentDate,  
*employeeId*)

ProjectEmployee (*employeeId*, *projectId*)

PinterestUserSavedPin (*pinId*, *userId*)

PinterestUserInterest (*userId*, *interestId*)

BoardPin (*boardId*, *pinId*)

Link to video –

[https://youtu.be/ZKw\\_lheJUso](https://youtu.be/ZKw_lheJUso)