A Project Reportz
on

“Gym Website”

Prepare By:

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Seat No (31)

A Report Submitted to

sardar Patel University

In Partial FulFilment of
BCA(Bachelor of Computer Applications) Degree
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Sardar Patel college of Administration & Management(SPCAM)
Sardar Patel Education Campus(SPEC)

BAKROL: 388315

Guided By : Mr. Chitan parmar

Sardar Patel college of Administration & Management
Certificate

- This is to certify that Mr/Ms _____

_____

Seat no 31 of BCA – SEM-VI has worked on project entitled

_____ from **08-09-2022 to 10/11/2022**

US06CBCA2& Project – II is in-house course of two credits.

He was regular in her work and developed around 70 hours for the project including analysis and design. He has complete the project satisfactorily.

Director / Head Project Guide

Acknowledgment

This project work has been the most pratical and execution part of my learning experience ,which would has an asset for me for my future career.it was a fruiful experience.in developing the project. There were many news things which i learned during develoment of project.

No system is created entirely by an individual.Many people have to create this system and each of their contribution has been valuable.Proper organization of coccept and analysis of the system id due to keep interest and helping hand of my teachers and collegues. It is my since desireb to express my heartfelt gratitude for the guidance as well as support.

My since thanks to our **Dr. NIRAV TRIVEDI** for molding mt thoughts and vision towards all the subject, i was studying in all these three years.

I am very thankful to **Mr.MEHUL PATEl ,** Head of the Department, who provided this opportunity for us work on the project.

I express my deepest gratitued to my project **Mr.CHINTAN PARMAR,** whose continuous encouragement and valuable suggestions has helped me to complete my project successfully.

Finally I am thankful to the entire staff of B.C.A department, sardar patel university , and all my colleagues for their kind cooperation. All of these have made my project

Regards

- Mohammad Amil Pathan

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INTRODUCTION

Introduction of Project

- “The purpose of a gym induction is to welcome members – whether they have previous experience inside a gym or not, “exlains wai yip, a person trailer at pure Gym Leeds feature likes.

1. Member Management Portal. ...
2. Fitness Class Schedule and Bookings. ...
3. Location and contact information
4. High-Quality Visuals and Fresh Content. ...
5. E-commerce.

Project profile

Project Title	GYM WEBSITE
Front End Tool	HTML,CSS,JAVASCRIPT
Back End Tool	PHP,SQLSERVER
Project Development By	Mohammad Amil
Project Submitted To	Sardar patel college of Administration & Management
Project incharge	Mr.Chintan Parmar

Purpose of The Project

- Increase our business
- To keep youth strong
- do business online
- Build a Business Profile
- Improve credibility

Problem of Existing System

- There are millions of gym websites online and most of them are unsuccessful. They don't speak to their ideal buyers, they don't provide valuable content and they don't represent the gym.

- Yes, exercise machines and most equipment looks exactly the same. You might be wondering why you should invest in professional photography and not just use stock imagery. If your competition has cool.
- The majority of the visitors arriving at your website are looking for more information. If they are not a member yet they are researching whether they are going to join your gym or another one in the area.

- A gym website typically just have the basics. We're located here, we have machines, workout here.

Solution of These Problems

- Payment service disruption has helped change the fitness industry. Select a gym software platform that integrates with some of the most innovative payment service providers to keep your club running smoothly at all times

- With the help of this system have many people maintain their fitness and body.

- Gym also appointed a personal trainer and trainer. They give a training to the people.

- We create 18 posts & 6 unique stories every month and post on your FB & Insta page.

2 SYSTEM ANALYSIS

Introduction

- This System help person maintain thier body and regular fitness.
- On the basis of bodybuilder requirement following feature are needed.

1. Their different types of pacakeges available
2. Different type of machines available
3. In websites Two types person is come. 1) youngest 2) old ager
4. Youngest has do hardwork and old ager are do simple
5. Youngest person has perform types of set like back,shoulder,chest and older person has perform running on machine.
6. In Modern times all gym are air conditions
7. All gym are available at top of building.
8. In gym protein also available at discount and gymbags also available.

System Workflow

1. Workflow of the System starts with first user see webpage.
2. Their have 4 section.
3. First section has contain menu. And in menu login is available
4. if user want to login in our website they login if they enter correct password then they enter otherwise they back to the home.
5. In second section their paragraph tag written and one photo of protein
6. In third section their different types of pacakages are available.
7. Last section is Footer.
8. User can can one page to another page to click on menu.
9. In this website Personal training is also available.
10. Person also see protein facilities.

Study of System

- This system is based on Waterfall model.
- The waterfall model can be used if the system is small and in this system thier no changes in between.

- In waterfall model complete all the stage then they correct their mistakes.
- Compare to other model waterfall model is better because they take less time and mistakes chances is less.

- Waterfall Model was the first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model.
- The Waterfall model is the earliest SDLC approach that was used for software development. Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project.

Hardware and Software Requirement

System Requirements

- Internet connection have been complusory

- Responsive & Engaging design. A great website has user-friendly interface
- Client Testimonials
- Leads Forms
- online store

➢ Supported browsers

- Google Chrome.
- Mozilla Firefox.
- Explorer.
- Safari.
- Netscape.

	Minimum	**Recommended**
Processor	Single-core 1GB or higher	Dual-core 2Ghz or higher
RAM	2 GB	3 GB

Hadr Drive	128 GB	1 TB

Bandwidth requirements

The bandwidth used will be optimized for the best experience based on the participants . Webpage can be run on browser.

Web page

- Website Should we responsive and run at any different browser
- website are different looking on different screen. For e g desktop, tablet, phone.

Frontend Requirement

- web browser (chrome, Firefox).
- Internet connection.
- TextEditor
- HTML (Hyper text markup language)
- CSS (Cascading Style Sheet)
- Javascript

Backend requirement

- PHP
- SQL server

Proposed System

- The proposed feature of system are following
- User must open a webpage .
- After that they see a hole webpage and User click on menu . In menu login facilities have.
- If user login successfully and not enter correct password back to home age.

- In menu different anchor tag available. User click on anchor tag they visit hole page of that anchor tag.
- When you make a website and want other people to see it, you will need to publish it with a wed hosting service
- website are hosted, or stored, on special computers called servers

➢ Best web hosting Provider

- **Hostinger-** Best overall.
- **Bluehost –** Best for new WordPree sites.
- **GreenGeeks –** Best eco-friendly.
- **SieGround –** Best wordPress Certified Host For Speed and Security**.**

Input & Output

INPUT:-

In this system input are based on module

Registration Input are:

- User Name
- User image
- Email
- Country
- Password
- City

OUTPUT :-

3 FEASIBILITY REPORT

Introduction

- A feasibility study is an analysis of the practicality of a project and its potential challenges that can be presented to investors or used as a

guideline by entrepreneurs. It provides an outline of expectations for a successful project and guidelines for determining if a project is

- The feasibility report is a document that assesses potential solutions to the business problem or opportunity and determines which of these are viable for further analysis.

- The purpose of the feasibility report is to present the project parameters and define the potential solutions to the defined problem, need or opportunity.

- Having brainstormed a variety of potential solutions, the project team expands on each of these potential solutions, providing sufficient detail, including very high level costing information, to permit the project leader to recommend to the approving authority all of the viable potential solutions that should be further analyzed in the Analysis Phase (Business Case).

- Project constraints and limitations of expenditure are among the various factors that will determine viability.

- Various types of feasibility that are commonly considered include.
  1. Technical feasibility
  2. operational feasibility
  3. Economic feasibility

Technical feasibility

- technical feasibility study assesses the details of how intend to deliver a product or service a product or service to customers.
- Technical feasibility is a standard practice for companies to conduct feasibility studies before commencing work on a project. Businesses undertake a technical feasibility study to assess the practicality and viability of a product or service before launching it.
- Technical feasibility is the formal process of assessing whether it is technically possible to manufacture a product or service

As per the requirement Technical tools neede are :-

- Developers
- Computers
- internet
- Services
- Database

Operational feasibility

- Operational feasibility is the measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.
- **Operational Feasibilit**y means that a Qualified Professional or operational specialist rationalizes that a goal can be completed without unreasonable difficulty, without employing unnecessary means and without incurring

extreme costs to achieve the same outcome by removing the factor that will require said difficulty, unnecessary means and incurring extreme costs. An intergovernmental process will occur when operational feasibility is used as a rationale to adhere to a result or strategy.

- The methodology shall provide information about: a) How the objectives and deliverables required under this RFP will be achieved;b) Determine the Technical and Operational Feasibility of the project concept through preliminary analysis;c) Determine the Financial and Economic Feasibility of the project concept through preliminary assessment;d) Gantt Chart indicating the detailed timeframe and sequence of activities.

- The Authority understands that making changes of this nature would have an impact various aspects of the operation and therefore through this Request for Proposal the Authority extends an invitation to competent consultancy firms for a consultancy to carry out an Operational Feasibility Study ("feasibility study") on operating hours for the Authority.

Economic feasibility

- The economic feasibility step of business development is that period during which a break-even financial model of the business venture is developed based on all costs associated with taking the product from idea to market and achieving sales sufficient to satisfy debt or investment requirements.

- **Economic feasibility elements include, but are not limited to:**

1. Increased agency revenue,
2. Decreased agency revenue,
3. Increased agency costs,
4. Decreased agency costs,
5. Increased revenue to other agencies and/or the general public,

6. Decreased revenue to other agencies and/or the general public,
7. Increased costs to other agencies and/or the general public,
8. Decreased costs to other agencies and/or the general public, and,
9. Other public benefits.

- The Business Case provides an analysis of the business environment including, but not limited to, a description of who the expected customers are, the nature of the business, how the payment is currently being processed, if applicable, and the current and expected volume and timing of transactions.

- If the electronic payment feature of the project can be separated from the entire project, the EFS should be prepared on the payment piece only.

4 SOFTWARE REQUIREMENT SPECIFICATIONS

Functional Requirement

- The project is a gym website person are get personal training,videos to fitness related,training etc.

- The Following feature that must be in our System.

1. Protein photo
2. Background image
3. form
4. footer
5. Registration user

6. Login
7. Menu
8. Logo
9. Paragraph
10. personal training

Non-Functional Requirements

- Non-Functional Requirements define system attributes such as security, reliability, performance, maintainability. They serves as contraints or restriction on the design of the system across the different baclogs.
- Types of Non-Functional Requirements under as follow us

1. Serviceability requirement
2. Manageability requirement
3. Recoverability requirement
4. Security requirement
5. Data integrity requirement
6. Usability requirement

7. Capacity requirement
8. Scalability requirement
9. Maintainability requirement
10. Reliability requirement
11. Regulatory requirement
12. Environmental requirement

5 SOFTWARE DEVELOPMENTS TOOLS

Two End of Website

- **The website divided into two ends**
  1. **Front End**
  2. **Back End**

Front End

- The front-end also known as client side part of application
- it is user interface fr every websites with which user can interact
- the front-end consists all visible parts responsible for the user experience

- it includes various components such as navigation bar, dropdown menus, form, links etc.

Front-end languages

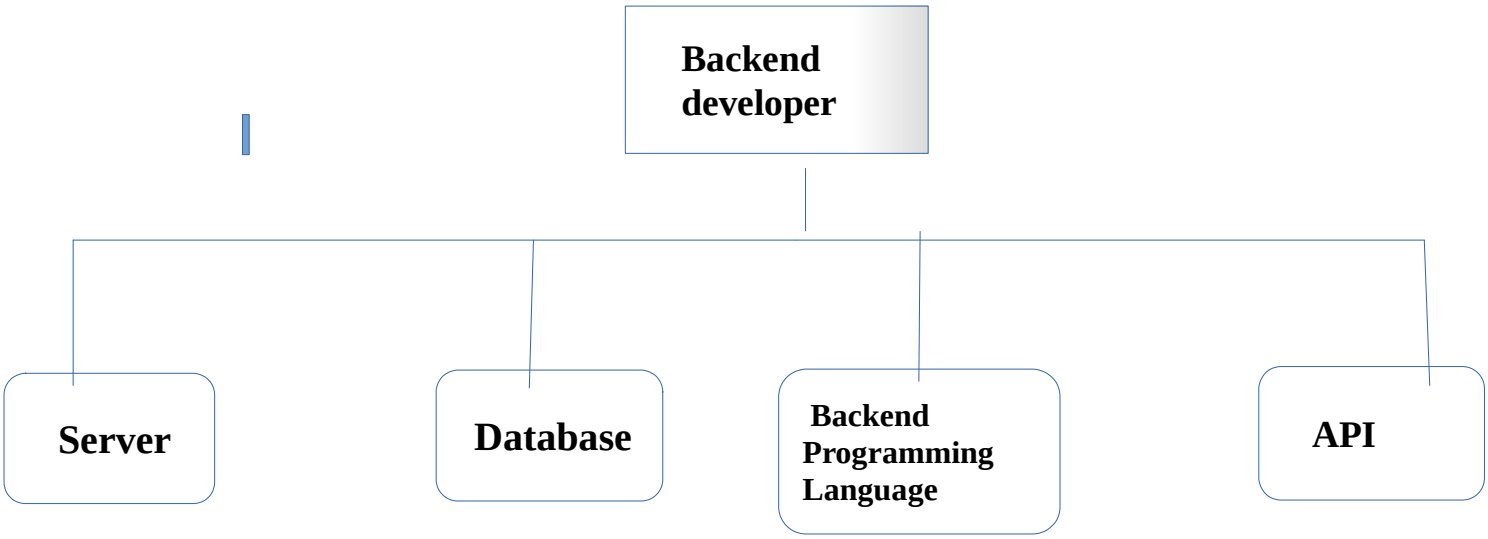
- ***HTML[Hyper Text Mark-up languages]***
- Provides basis structure to website
- HTML is what to display

- ***Css[Cascading style sheet]***
- Provides styling to web page
- CSS is how html elements will be display

- ***JAVASCRIPT***
- to create interactive websites
- Client side validation
- Popular and events

Back End

- Back-end development means working on server-side software , which focuses on everything you can't see on a website
- Backend developers ensure the website performs correctly. Focusing on database, back-end logic, application programming interface (APLs), architecture , and servers.



Back-end Languages

- Node Js (Javascript) + MongoDB
- PHP + Mysql Database
- Django

- Java

Web Hosting

- When you make a website and want other people to see it, you will need publish it with a web hosting service
- it is a service that allows organizations and individuals to post a website or webpage on to the internet
- Website are hosted , or stored , on specialcomputer called servers

Best Web hosting Provider

- Hostinger
- Bluehost
- Dreamhost
- Hostgator
- Greengeeks
- SiteGround

6 SYSTEM DESIGN

introduction

-

- System Design is the processof defining the components,API,Database tAbles, etc.for system to satisfy the specified functional and non-functional requirements.
- **System Design = System + design**
- **System** : Assembly different components fot the specified requirements.
- **Design** : How efficiently the assembly of different components is done

Why do we need it?

we need it because we want our hole system designed in such a way so that , we can.

- Scale our system easily , we should be able to add a new machine or increase the size of the current machinewhen required. This comes when our number of users start growing.'
- The system should have no downtime. Any request to the server should not fall.
- Our system should have low latery. API should be fast.
- Our System should have multiple copies of the server. In the case of hardware fail ure, it should be easily able to up with almost no downtime.
- The system should be able to sync across multiple same types of servers for data consistency.
- The load should be evenly distributed across all the servers.
- Our components in our system should work at its best efficiency.

What are the Required concepts

Basically we engineer our system in such a way that all our requirement are fulfilled. We use the concepts of computer science such as

- Computer Network
- Distributed Systems
- parallel Compputing

By using the concepts we of the following

- Do the estimation
- Design the API
- Design the database
- Decide the storage system

NORMALIZATION

- Normalization is the process of organizing the data in the database

- Normalization is used to minimize the redudancy from a relation or set of relation. It is also used to elimate the undersirable characteristics like insertion, update and deletion anomalies

- Normalization divide the larger table into the smaller table and link then using relationship.

- The normalization form is used to reduce redundancy from the database

- Normalization is the process to eliminate data redundancy and enhance data integrity in the table.

- It is a multi-step process that sets the data into tabular form and removes the duplicated data from the relational tables

Normal Form	Description
1NF	A relation will be in 2NF if it contain an atomic value.
2NF	A relation will be 2NF if it is in 1NF and all non-key attributes are fully functional dependent on the primary key.
3NF	A relation will be in 3 NF if it is in 2 NF and no transition Dependency exists.
4NF	A relation will be in 4Nf if it is in Boyce Cod normal form and has no multi-valued Dependency

First Normal Form

- A relation will be 1 nf if it contains an atomic value.
- It states than an attribute of a table cannot hold multiple values.it must hold only sign-valued attribute.
- First normal disallows the multi-valued attribute, composite attribute , and their combinations.

USER_ID	USER_NAME	USER_PHONE	USER_STATE
6	ANIL	8749254970	BIHAR
12	JAGDISH	9723045721	GUJARAT
3	DEV	8845291402	RAJASTHAN

USER_ID	USER_NAME	USER_PHONE	USER_STATE

6	ANIL	8749254970	BIHAR
6	ANIL	8749254970	BIHAR
3	DEV	8845291402	RAJASTHAN

Second Normal Form (2NF)

- In the 2NF , relational must be in 1NF.
- IN the second normal form , non-key attributes are fully functional dependent on the primary key.

USER_ID	USER_STATE	USER_AGE
18	DELHI	20
11	TAMILNADU	22
8	KARNATAK	18

In the given table non-prime attribute USER_AGE is dependent on USER_ID which is proper subset of a candidate key. That why it violates the rule for 2NF

to convert the given table into 2NF , we decompose it into two tables.

USER_DETAIL table.

USER_ID	USER_AGE
13	19
16	22
12	24

USER_SUBJECT table.

USER_ID	USER_STATE
13	MADYA PRADESH
16	MAHARASHTRA
12	GUJARAT

Third Normal Form (3NF)

- A relation will be in 3NF if it is in 2NF and not contain any transitive partial dependency
- 3NF is used to reduce the data duplication. It is also used to achieve the data int eqrity
- if there is no transitive dependency for non-prime attributes ,then the ralation must be in third normal form.

  A relation is in third normal form if it holds atleast one of the following conditions for ever non-trival function dependency.

  X – Y.

1. X is a super key.
2. Y is a prime attribute , i.e each element of y is part of the candidate key

U-ID	U_NAME	U_ZIP	U_STATE	U_CITY
233	ANIL	547200	BIHAR	PATNA
111	DEV	431287	RAJASTHAN	JAIPUR
444	JAGDISH	291302	GUJARAT	VADODARA
555	DEV	431287	RAJASTHAN	JAIPUR

Super key in the table above:

1{USER_ID}, {USR_ID , {USR_NAME},{USR_ID, USA_NAME, USR_ZIPP}....so on

Candidate key: {USR_ID}

Non-prime attributes : In the given table , all attributes on except USR_ID are non-prime.

Here , USR_STATE & USR_CITY dependent on USR_ZIP and USR_ZIP dependent on USR_ID . The non-prime attributes (USR_STATE , USR_CITY) transitively dependent on super key(USR_ID). It violates the rule of third normal form.

USER table:

U-ID	U_NAME	U_ZIP
233	ANIL	547200

111	DEV	431287
444	JAGDISH	291302
555	DEV	431287

EMPLOYEE_ZIP table

U_ZIP	**U_STATE**	**U_CITY**
547200	BIHAR	PATNA
431287	RAJASTHAN	JAIPUR
291302	GUJARAT	VADODARA
431287	RAJASTHAN	JAIPUR

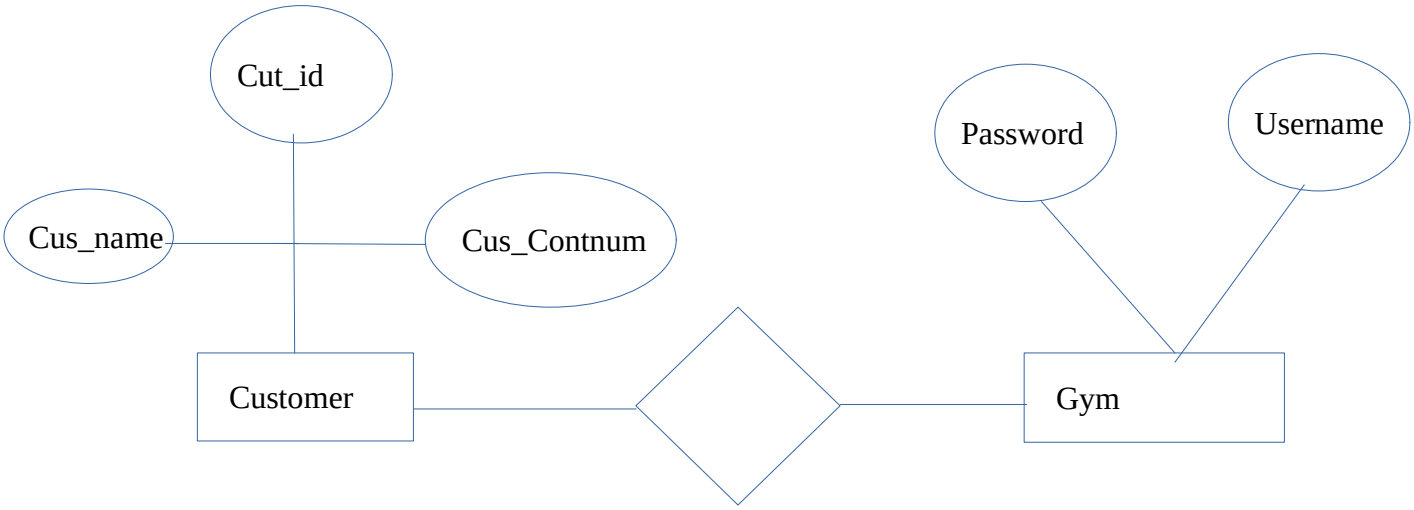
E-Digram

_An entity relationship diagram (ERD), also known as an entity relationship model, is a graphical representation that depicts relationships among people, objects, places, concepts or events within an information technology (IT) system.

What is an Entity Relationship Diagram (ER Diagram)

- An entity relationship diagram (ERD), also known as an entity relationship model, is a graphical representation that depicts relationships among people, objects, places, concepts or events within an information technology (IT) system. An ERD uses data modeling techniques that can help define business processes and serve as the foundation for a relational database.

A simple ER Diagram



- In the following diagram we have eight entities user , membership type , member , payment , workout , workout plans , Instructor , promotional material.

- Rectangle : Represents entity sets.
- Ellipses : Attributes
- Diamond : Relationship set.
- Lines : They link attributes to Entity sets and Entity sets to relationship set
- Double Ellipse : Multivalued attributes.
- Double Rectangle : Weak Entity sets.
- Double Lines : Total paticipation of an Entity in a relationship set.

Components of a ER Diagram

- Entity
- Attribute
- Relationship

➢ Entity

ER diagram notations and symbols. Similar to other diagram shapes, in ER diagrams entities are represented with rectangles, attributes are represented by ovals or inside entities, and relationships are shown in diamonds or with lines.

Entity type. A person, organization, object type, or concept about which information is stored. Describes the type of the information that is being mastered. An entity type typically corresponds to one or several related tables in database. Attribute

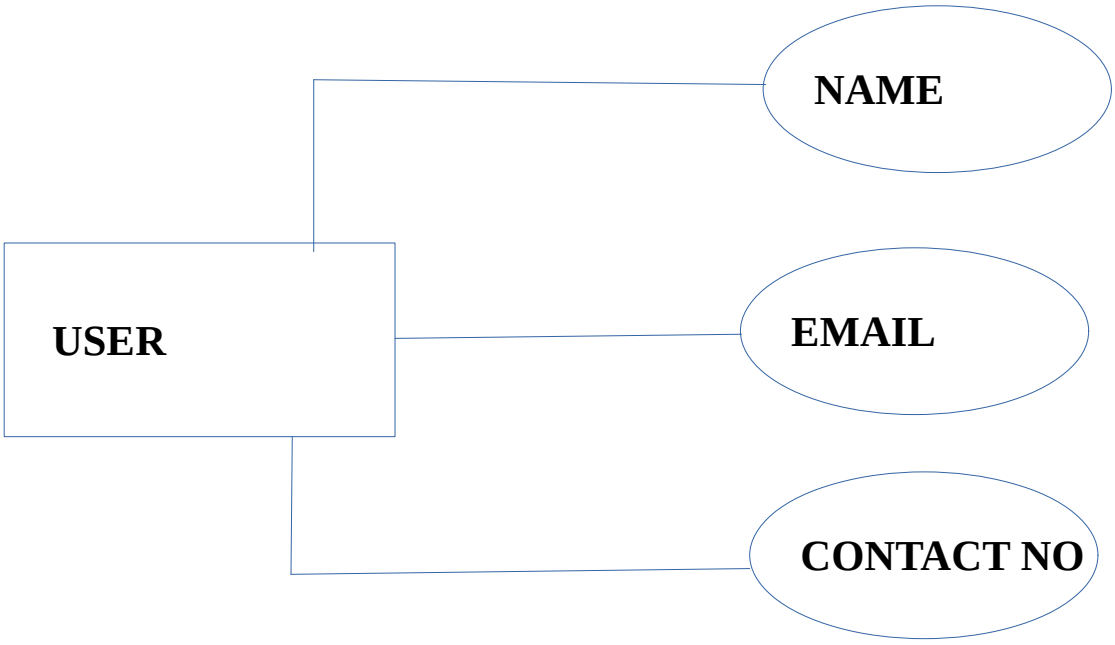
Weak Entity

The entity sets which do not have sufficient attributes to form a primary key are known as weak entity sets and the entity sets which have a primary key are known as strong entity sets.

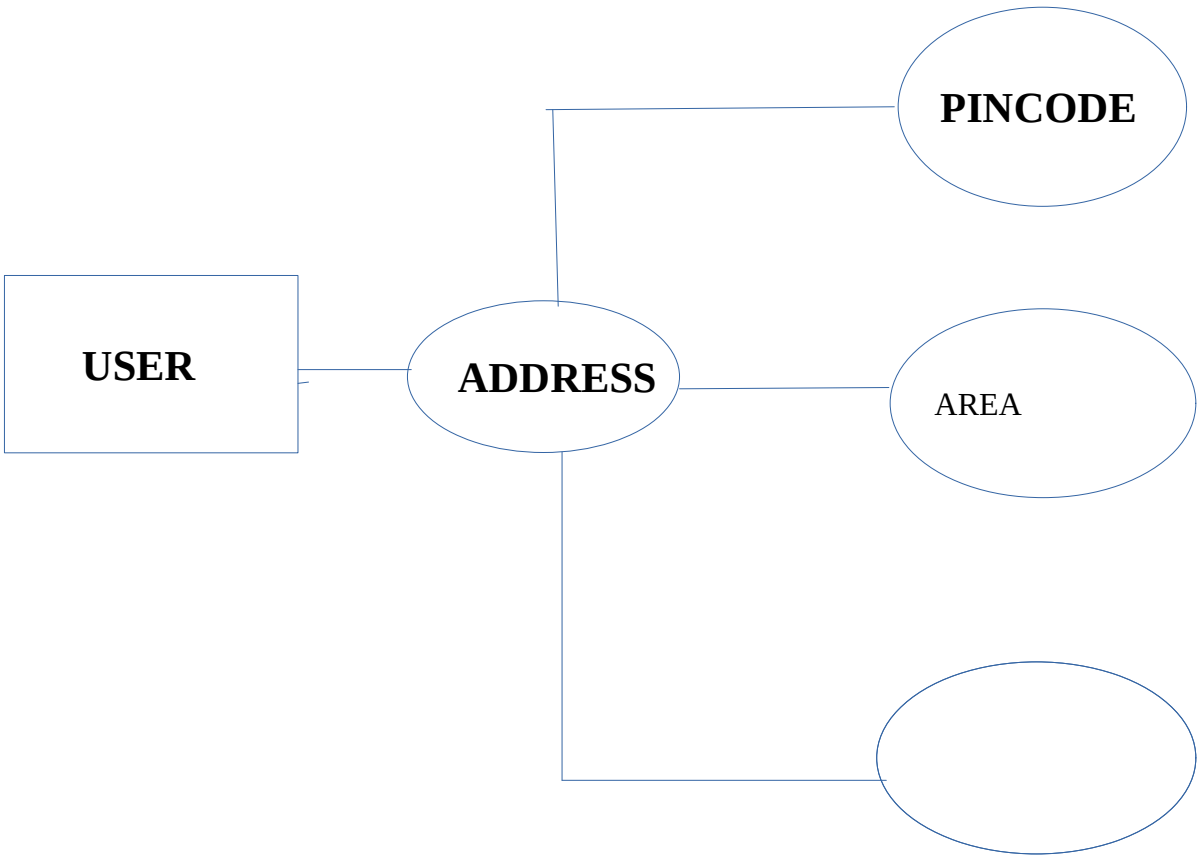
Attribute

An attribute describes the property of an entity. An attribute is represented as o val in a Diagarm . Thereare four types of attributes.

- Key attribute
- Composite attribute
- Multivalued attribute
- Derived attribute



A key attribute can uniquely identify an entity from an entity set. For example set. For example, username unique and password is unique.



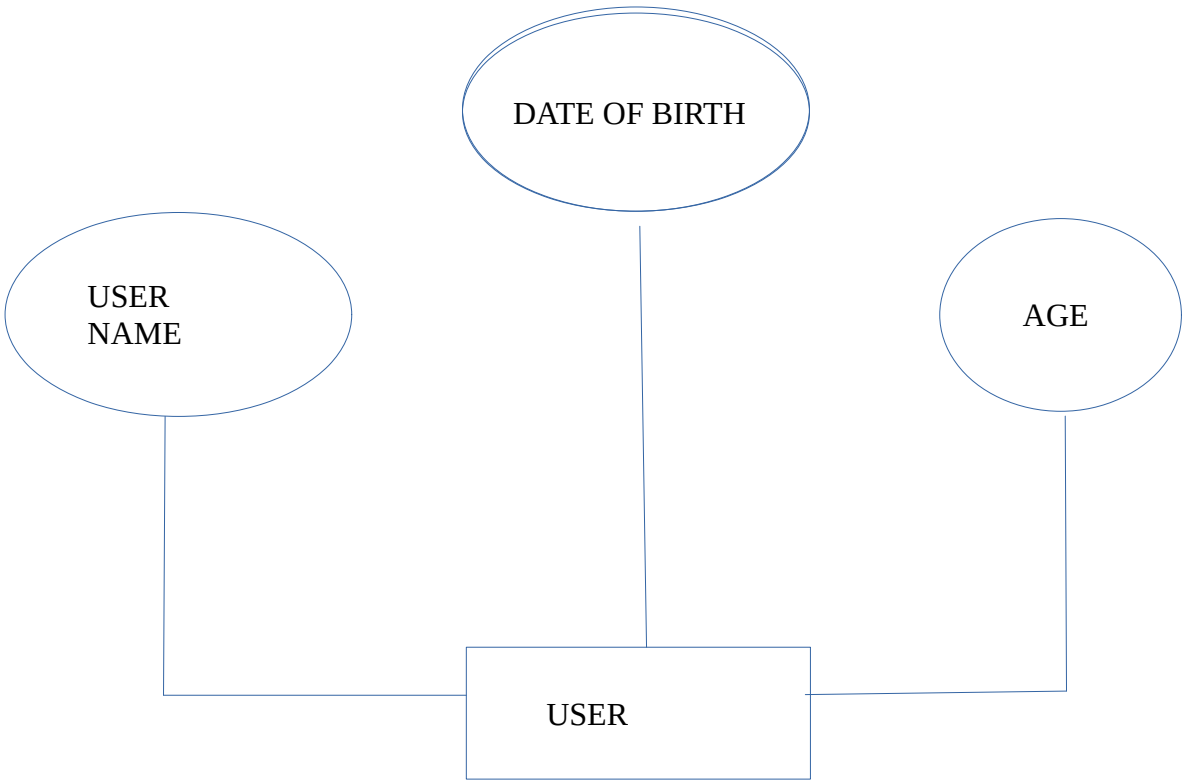
Multivalued Attribute

- An attribute that can hold multiple values is known as multivalued attribute. It is represented with double ovals in an ER Diagram.
- Multivalued attribute An attribute that can hold multiple values is known as multivalued attribute. It is represented with double ovals in an ER Diagram

Derived attribute

An attribute that can be derived from other attributes is derived attributes. Example: Total and average marks of a student.

If an attribute's value can be derived from the values of other attributes, then the attribute is derivable, and is said to be a derived attribute.



Data Flow Diagrams

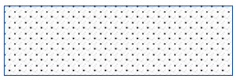
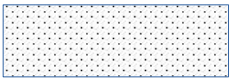
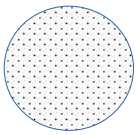
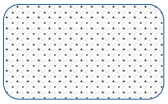
- It uses defined symbols like rectangles, circles and arrows, plus short.....
- A data flow diagram (DFD) is a graphical or visual representation using a standardized set of symbols and notations to describe a business's operations through data movement.
- Here, we will see mainly 3 levels in the data flow diagram, which are: 0-level DFD, 1-level DFD, and 2-level DFD.
- A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination.

The following observations about DFDs are essential.

- All names should be unique. This makes it easier to refer to elements in the DFD.
- Remember that DFD is not a f bw chart. Arrows is a f bw chart that represents the order of events. Arrows is DFD represents f bwing data. A DFD does not involve an y order events.
- Suppress logical decision. If we ever have the urge to draw a diamond - shaped box in DFD,suppress that urge| A diamond-shaped box is used in f bw charts to represents.

Decision point with multiple exists paths of which the only one is taken. This impied an ordering of events, which makes no sens in a DFD.

Data Flow Diagrams Symbols

Notation	De Marce & Yourdon	Gane and Sarson
External Entity		
Process		
Data Store		
Data Flow		

External entity

External Entity – Also known as actors, sources or sinks, and terminators, external entities produce and consume data that flows between the entity and the system being diagrammed. These data flows are the inputs and outputs of the DFD.