MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

VIVEKANAND EDUCATION SOCIETY POLYTECHNIC

MICRO PROJECT

Academic year: 2021-22

TITLE OF PROJECT

Study Analyze Sports Academy Management System Software
And Write FEATURES and UML Diagram

Program: Computer Engineering

Program code: CO-4I (B)

Course: Software Engineering (SEN)

Course code: 22413

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Academic year: 2021-22   Name of the faculty: Mrs. Sangita Bhoyar

Program code: CO-4I -B   Course & Course code: Software Engineering (SEN)

Roll No: 53,54,55,56   Enrollment No. 2000040444, 2000040445,

                                                2000040446,2000040447

Semester: 4th Name of the Students: Tanvi G, Janhvi G,

                                                Paras K, Sakshi B

MAHARASHTRA STATE

BOARD OF TECHNICAL EDUCATION

Certificate

This is to certify that Mr./Miss**.** Tanvi G, Janhvi G, Paras K, Sakshi B Roll No. 53,54,55,56 of Forth Semester of Diploma in Computer Engineering Of Institute, V.E.S. POLYTECHNIC (Code: 0004) has Completed the Micro Project satisfactorily in Software Engineering (22413) for the academic year 2021 - 2022 as prescribed in the curriculum.

Place: Mumbai

Date: 21/05/22

Enrollment No: 2000040444, 2000040445,
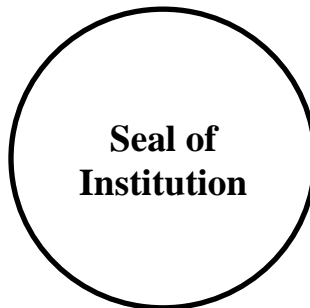
2000040446,2000040447

Exam Seat No: 102423,102424,102425,102426

Subject Teacher   **Head of the Department**   **Principal**

Sangita Bhoyar

Seal of Institution

Micro Project Proposal

Title - Study Analyze Sports Academy Management System
Software And Write FEATURES and UML Diagram

1.0 Aim of Micro Project :

- To study and learn suitable Software Process Model for software development
- To study and learn software requirement specification.
- To study and understand the use for software designs.

2.0 Course Outcomes Addressed:

CO1 Select suitable Software Process Model for software development.

CO2 Prepare software requirement specification.

CO3 Use Software modelling for software designs.

CO4 Estimate size and cost of the project.

3.0 Proposed Methodology

- Discussion about topic with guide and among group members
- Literature Survey.
- Submission of project proposal
- Information collection
- Analysis of Data
- Representation
- Editing and revising of content
- Report preparation

4.0 Action Plan

Sr. no.	Activity performed	Planned Start date	Planned Finish date	Name of Responsible Team Members
1	Discussion and finalization of topic	26/02/22	05/03/22	All members
2	Preparation and submission of Abstract	05/03/22	05/03/22	All members
3	Literature Review	26/03/22	9/04/22	All members
4	Collection of Data	16/04/22	23/04/22	All members
5	Compilation of Report And Presentation	30/04/22	7/05/22	All members
6	Actual Presentation & Final submission of Micro Project	14/04/22	21/05/22	All members

5.0 Resources required:

S. No.	Name of Resource/material	Specifications	Qty
1	Computer System	i3 10th gen, 4GB ram, 1TB HDD	1
2	Operating System	Windows 10	1
3	Software	MS Word	1

Group Details:

Sr.No	Roll No	Name of Student
1	53	Tanvi Gadkari
2	54	Janhvi Gaikar
3	55	Paras Khandagale
4	56	Sakshi Bhawar

Name of Guide: Mrs. Sangita Bhoyar

<u>Micro Project Report</u>

<u>Title:</u> <u>Study Analyze Sports Academy Management System Software And Write FEATURES and UML Diagram.</u>

1.0 <u>Rationale:</u>

The purpose of the online Sport Academy Management system is to allow users to register and select various sports such as Football, cricket, Volleyball, Basketball and many more. Thesis allows for registration/cancellation facilities separately for staff and students. The system is set up in such a way that it can be used for any sport by users. Different privileges are given to different types of users. If the users are willing to cancel their registration then refund(100%) will be done in less than 24 hours.

2.0 <u>Aim of Micro Project</u> :

- To study and learn suitable Software Process Model for software development
- To study and learn software requirement specification.
- To study and understand the use for software designs.

3.0 <u>Course Outcomes Addressed</u>:

CO1 Select suitable Software Process Model for software development.

CO2 Prepare software requirement specification.

CO3 Use Software modeling for software designs.

CO4 Estimate size and cost of the project.

4.0 Literature Review:

Introduction:
- The management system developed is a very useful, user-friendly and reliable application.
- Minimalizes the man power.
- We have the system which has the capability of display various sports and tournament details.
- This provides security to the system by authenticating each member and provides confidence to the consumer that his/her personal information is secure.
- Needs very less system requirement.
- Developed using waterfall method because needs limited resources and also doesn't require much number of updates.

Features:
- Admin/Staff Login: Login and registration page for admin and Staff
- User Login/Register: Login and registration page for User
- Admin main page: This page has all the admin tools and functions like giving access to certain part of database to a customer.
- User main page: This interface is for staff in this interface admin assigns the teams to a Provide the list of Sports the users can play.
- Details and Facility page: This includes all Facility to reserve slots that are available.
- Help page: This page will include the instructions for Facility to cancel the reservation for slots made earlier.
- Payment details.: Provide monthly, anually pack for users and give some extra offers . and also payments can be done online/offline.

UML diagram
Unified modelling language was created to forge a common, semantically and syntactically rich visual modelling language for the architecture, design and implementation of complex software systems both structurally and behaviourally.

DFD (Data Flow Diagram)
A Data flow diagram (or DFD) is a graphical representation of the flow of data through an information system. It shows how information is input to and output from the system, the sources and destinations of that information, and where that information is stored. Focus is on the flow of information, where data comes from, where it goes and how it gets stored.

DFD Rules
• Each process should have at least one input and an output.
• Each data store should have at least one data flow in and one data flow out.
• Data stored in a system must go through a process.
• All processes in a DFD go to another process or a data store.

DFD Symbols

External Entity	
Process	
Data Store	

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| Data Flow | |

Use Case Diagram

The purpose of a use case diagram in UML is to demonstrate the different ways that a user might interact with a system. Use case diagrams are used to gather the requirements of a system including internal and external influences. The purposes of use case diagrams can be said to be as follows –

1. Used to gather the requirements of a system.
2. Used to get an outside view of a system.
3. Show the interaction among the requirements are actor.

Actor

Someone that interacts with the use case (system function).
• Named by a noun.
• Actor plays a role in the business.
• Similar to the concept of user, but a user can play different role.

Use Case

• System function (process – automated or manual).
• Named by Verb + Noun (or Noun Phrase). i.e. Do Something

Use Case Example –

    Association Link:

A Use Case diagram illustrates a set of use cases for a system, i.e. the actor and the relationships between the actor and the use cases.

ER-Diagram

ER-modeling is a data modeling method used in software engineering to produce a conceptual data model of an information system. Diagrams created using this ER modeling method are called Entity Relationship Diagrams or ER diagrams or ERDs.

Purpose of ER-Diagram:

• The database analyst gains a better understanding of the data to be contained in the database through the step of constructing the ERD.
• The ERD serves as a documentation tool.
• Finally, the ERD is used to connect the logical structure of the database to users.
• ERD effectively communicates the logic of the database to users.

Components Of ER-Diagram:

1. **Entity**:

   An entity can be a real-world object, either animate or inanimate, that can be merely identifiable. An entity is denoted as a rectangle in an ER diagram. For example, in a school database, students, teachers, classes, and courses offered can be treated as entities. All these entities have some attributes or properties that give them their identity.

2. **Entity Set:**

   An entity set is a collection of related types of entities. An entity set may include entities with attribute sharing similar values. For example, a student set may contain all the students of a school; likewise, a teacher set may include all the teachers of a school from all faculties. Entity set need not be disjoint.

3. **Attributes:**

   Entities are denoted utilizing their properties, known as attributes. All attributes have values. For example, a student entity may have name, class, and age as attributes. There exists a domain or range of values that can be assigned to attributes. For example, a student's name cannot be a numeric value. It has to be alphabetic. A student's age cannot be negative, etc.

4. **Relationship set:**

   A set of relationships of a similar type is known as a relationship set. Like entities, a relationship too can have attributes. These attributes are called descriptive attributes.

Activity Diagram

An activity diagram is a behavioral diagram i.e. it depicts the behavior of a system. An activity diagram portrays the control flow from a start point to a finish point showing the various decision paths that exist while the activity is being executed.

An activity diagram shows business and software processes as a progression of actions. These actions can be carried out by people, software components or computers. Activity diagrams are used to describe business processes and use cases as well as to document the implementation of system processes.

State Diagram

A state diagram is used to represent the condition of the system or part of the system at finite instances of time. It's a behavioral diagram and it represents the behavior using finite state transitions. State diagrams are also referred to as State machines and State-chart Diagrams. These terms are often used interchangeably. So simply, a state diagram is used to model the dynamic behavior of a class in response to time and changing external stimuli. We can say that each and every class has a state but we don't model every class using State diagrams. We prefer to model the states with three or more states.

5.0 Actual Methodology Followed:

1. First we decided the topic of the microproject (write your topic)
2. Then we gathered information about (topic name)
3. Report of the project was prepared after gathering information using word.
4. With the collected information a rough report was prepared.
5. After enough information was collected, the suitable information was revised and
   selectively arranged as per the need of the project.
6. After that the revised information were put together in the finalized report.
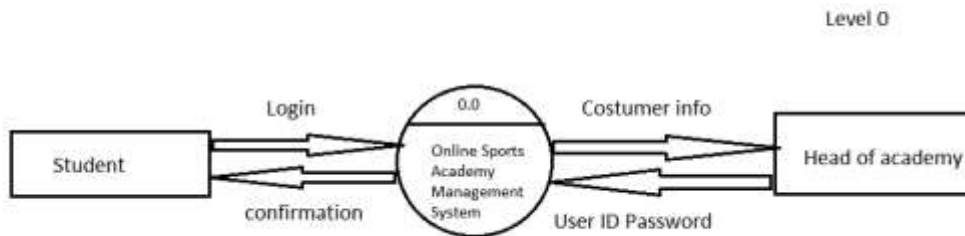
6.0   Actual Resources Used:

Sr. No.	Name of Resource/material	Specifications	Qty	Remarks
1	Processor	RYZEN	1	
2	Operating System	Windows, Windows 10	1	
3	Memory	4GB RAM	1	
4	Hard Disk	1TB HDD	1	

7.0 Outputs of micro-projects

DFD – Data Flow Diagram:
DFD Level 0:

Level 0

Student — Login → 0.0 Online Sports Academy Management System — Costumer info → Head of academy

confirmation ← | → User ID Password

DFD Level 1:

level 1

Login
Registration
Cancellation
Slots booking

Student

Refund on cancelation

Payment
Receipt

0.0 online sports academy management system

Login

Student

Staff

Schedule

Username password

student and staff info

Head of Academy
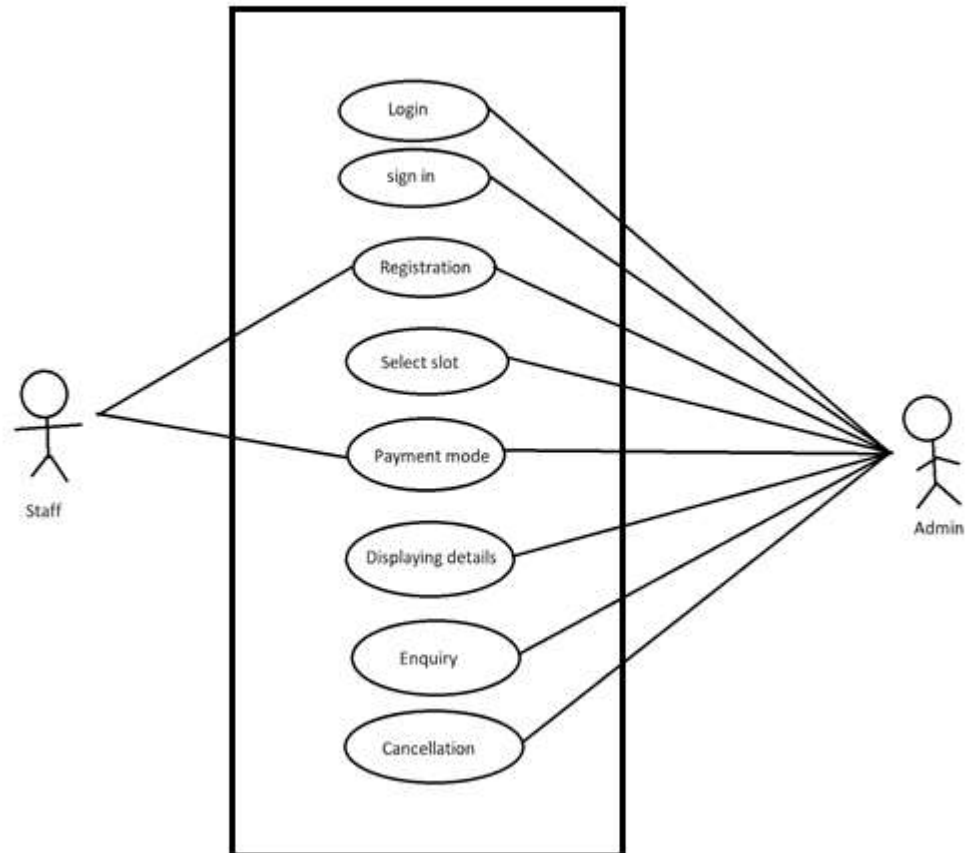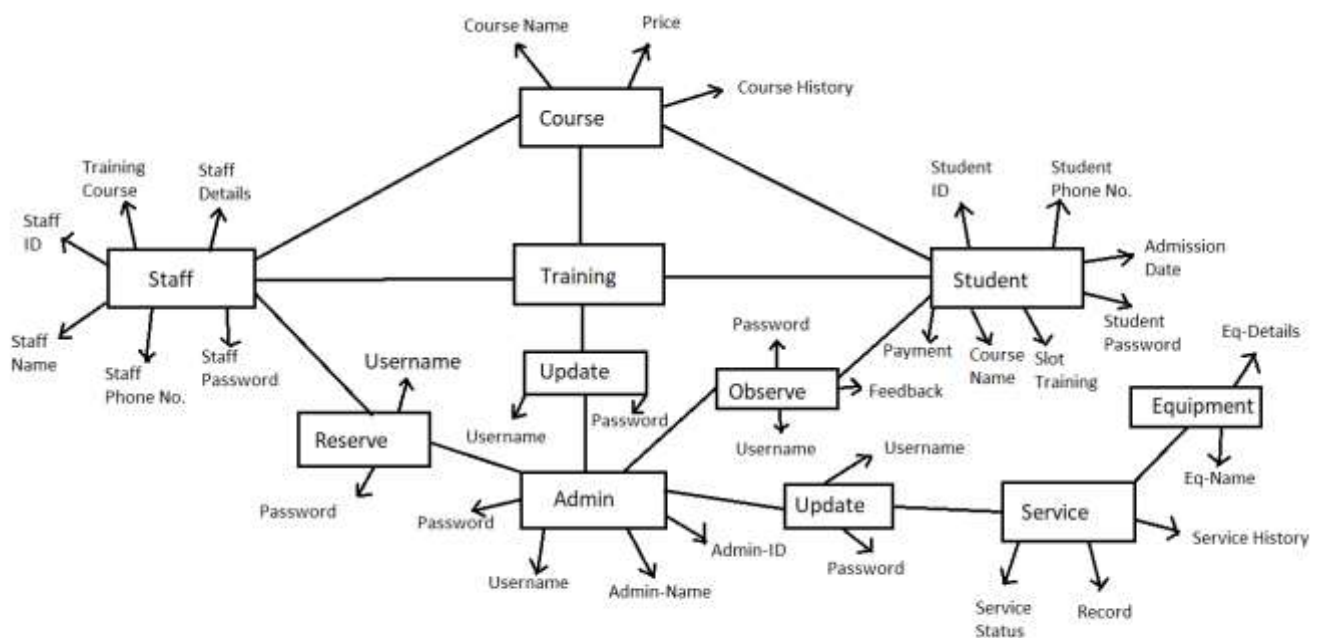
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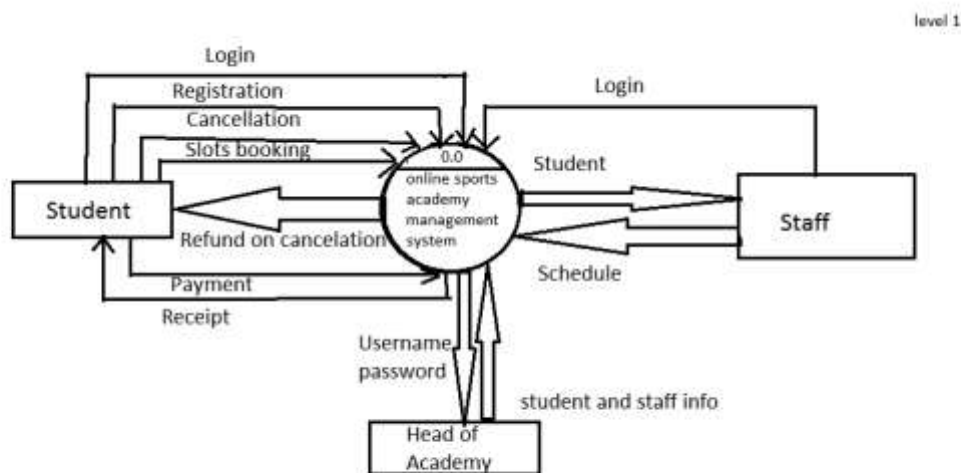
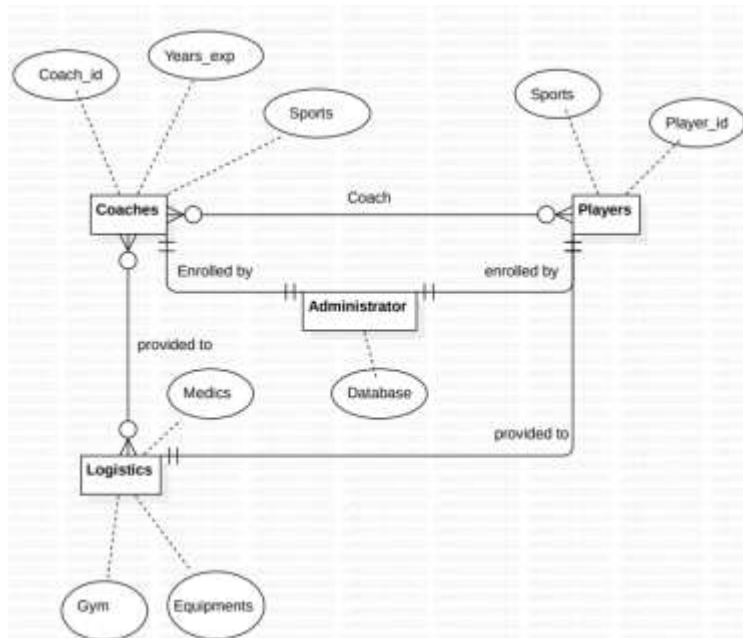## Use case Diagram:

ER Diagram:

Activity diagram

8.0 Skill Developed / learning out of this Micro-Project

The following skills were developed-

1. **Designing:** Designing of micro project with minimum required resources and at low cost.
2. **Teamwork:** Learned to work in a team and boost individual confidence.
3. **Time Management:** Timely completion of micro project as scheduled.
4. **Data Analysis:** Interpretation of data: drawing and analysis of graphs, laboratory calculations, etc.
5. **Problem-solving:** Develop good problem-solving habits.
6. **Technical writing:** Preparing a report of the proposed plan and final report.
7. **Presentation:** Giving a working model presentation of the micro project.

9.0 Applications of this Micro – Project.

1. This system is used to allow users to register and select various sports.

2. If the users are willing to cancel their registration then refund.(100%)

3. This system makes the record more secure.

References:

- Tutorials point
- Ques10.com
- hackr.io
- Geeks for geeks

Sign of the faculty

Mrs. Sangita Bhoyar

Suggested Rubric for Assessment of Micro-Project

S. No.	Characteristic to be assessed	Poor (Marks 1 - 3)	Average (Marks 4 - 5)	Good (Marks 6 - 8)	Excellent (Marks 9- 10)
1	Relevance to the course	Relate to very few LOs	Related to some LOs	Take care of at-least one CO	Take care of more than one CO
2	Literature Survey /information collection	Not more than two sources (primary and secondary), very old reference	At-least 5 relevant sources, at least 2 latest	At –least 7 relevant sources, most latest	About 10 relevant sources, most latest
3	Completion of the Target as per project proposal	Completed less than 50%	Completed 50 to 60%	Completed 60 to 80%	Completed more than 80 %
4	Analysis of Data and representation	Sample Size small, data neither organized nor presented well	Sufficient and appropriate sample, enough data generated but not organized and not presented well. No or poor inferences drawn	Sufficient and appropriate sample, enough data generated which is organized and presented well but poor inferences drawn	Enough data collected by sufficient and appropriate sample size. Proper inferences drawn by organising and presenting data through tables, charts and graphs.
5	Quality of Prototype/Model	Incomplete fabrication/assembly.	Just assembled/fabricated and parts are not functioning well. Not in proper shape, dimensions beyond tolerance limit. Appearance/finish is shabby.	Well assembled/fabricated with proper functioning parts. In proper shape, within tolerance dimensions and good finish/appearance. But no creativity in design and use of material	Well assembled/fabricated with proper functioning parts. In proper shape, within tolerance dimensions and good finish/appearance. Creativity in design and use of material
6	Report Preparation	Very short, poor quality sketches, Details about methods, material, precaution and conclusions omitted, some details are wrong	Nearly sufficient and correct details about methods, material, precautions and conclusion. but clarity is not there in presentation. But not enough graphic description.	Detailed, correct and clear description of methods, materials, precautions and Conclusions. Sufficient Graphic Description.	Very detailed, correct, clear description of methods, materials, precautions and conclusions. Enough tables, charts and sketches
7	Presentation of Micro Project	Major information is not included, information is not well organized .	Includes major information but not well organized and not presented well	Includes major information and well organized but not presented well	Well organized, includes major information ,well presented
8	Viva	Could not reply to considerable of question.	Replied to considerable number of questions but not very properly	Replied properly to considerable number of question.	Replied most of the questions properly

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Micro-Project Evaluation Sheet

Academic year: 2021-22   **Name of the faculty:** Mrs. Sangita Bhoyar

Program code: CO-4I (B)   **Course & Course code:** Software Engineering (SEN)

Roll No: 53,54,55,56   **Enrollment No.** :2000040444, 2000040445,

2000040446,2000040447

Semester: 4th   **Name of the Students:** Tanvi G, Janhvi G,

Paras K, Sakshi B

Title of the Micro-Project : Study Analyze Sports Academy Management System Software
And Write FEATURES and URL Diagram.

Course Outcomes Achieved: CO1, CO2,CO3,CO4.

Evaluation as per Suggested Rubric for Assessment of Micro Project

Sr. No.	Characteristic to be assessed	Poor Marks 1-3	Average Marks 4-5	Good Marks 6-8	Excellent Marks 9-10	Sub Total
(A)Process and product assessment Out Of 6						
1	Relevance to the course					
2	Literature Survey Information Collection		.			
3	Completion of the Target as per project proposal					
4	Analysis of Data and representation					
5	Quality of Prototype/Model/Content					
6	Report Preparation					
(B)Individual Presentation/Viva Out of 4						
7	Presentation	.				
8	Viva					

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Micro-Project Evaluation Sheet

Roll No.	Name	Process and Product Assessment (6 marks)	Individual Presentation/Viva (4 marks)	Total Marks 10
53	Tanvi Gadkari			
54	Janhvi Gaikar			
55	Paras Khandagale			
56	Sakshi Bhawar			

Comments/Suggestions about teamwork/leadership/interpersonal communication (if any)

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Name and designation of the Faculty Member: **Mrs. SANGITA BHOYAR (Lecturer)**

Signature_____