

## **Skill Development Project [SDP] - 1**

We started mid grad capstone projects as part of our skill development and for Y21 students we introduced them to implement the concepts from their II Year I Sem. Combining all these concepts together, students are required to complete a project specific to a business system that they chose. This project is titled "**Skill Development Project - 1**".

List of courses that have evaluation components in relation to the Skill Development Project – 1 are listed below:

- Mathematical Programming / Probability, Statistics & Queueing Theory
- Python Full Stack Web Development / MERN Stack Web Development
- Design Thinking for Innovation

### **A. SDP - 1 Timeline:**

Week 3	Team Formation, Naming of the team & Choice of Business System
Week 4	Allocation of Project Mentoring Team, setting up communication channels through Microsoft Teams & Review - 0
Week 5	Survey & Field-Study on the chosen business system
Week 6	Update the Survey & Field-Study in LinkedIn by creating a page
Week 6	Finalising the use cases (functional requirements) for the project.
Week 7	Review 1
Week 11	Review 2
Week 13	Final Internal Review
Week 16	Final End-Sem Review & Hackathon

### **B. Instruction regarding team formation:**

- i. Maximum team size – 3 Members
- ii. Team selection process will be taken place in LMS
- iii. Team formation can be done only inside a particular cluster of which student belong too.
- iv. Change of team or team members are NOT allowed by the department.
- v. For each team – “Team Lead” will be selected randomly by department.
- vi. Team Lead will be selecting the Business System after discussing with team members
- vii. Business system selection will also take place only in LMS the next day after team formation.

## C. SDP – 1 – List of Business Systems

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## D. SDP – 1 - Business System Descriptions

### 1. Agriculture & Aquaculture Systems (AAS)

Agriculture is the science and art of cultivating plants and livestock. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that enabled people to live in cities.

Aquaculture (less commonly spelled aquiculture), also known as aqua farming, is the farming of fish, crustaceans, molluscs, aquatic plants, algae, and other organisms. Aquaculture involves cultivating freshwater and saltwater populations under controlled conditions, and can be contrasted with commercial fishing, which is the harvesting of wild fish. Mariculture commonly known as marine farming refers to aquaculture practiced in marine environments and in underwater habitats, opposed to in freshwater. Particular kind of aquaculture include fish farming, shrimp farming, oyster farming, mariculture, alga culture (such as seaweed farming), and the cultivation of ornamental fish.

## 2. Astrological Predictions Systems (APS)

Astrology is the area that generates lots of curiosity among human beings. To find scientific theories and its relations with astrology, changes are to be done in the way astrology is looked upon. To find scientific basis to astrology changes are to be made from the traditional ways in which astrology is analysed.

Identify the scientific sis using various classification techniques of artificial intelligence. These techniques are used to perform classification of data automatically. Various classification techniques used here have resemblance with the way astrology works.

First step for prediction involves performing various classification techniques of artificial intelligence that are treated as black box for already existing methods which provided good results in various fields for classifying data.

Next step involves finding out the attributes that helps in improving the dynamic prediction in astrology and then updating the knowledge of the system when more records come in picture. The results in the form of rules will be generated by the classification techniques. These rules generated by classification techniques will be backtracked and verified against the rules used by astrologers. Resemblance between these rules generated by classification techniques and rules provided by astrology.

## 3. Banking & Finance Systems (BFS)

A bank is a financial institution which is involved in borrowing and lending money. Banks take customer deposits in return for paying customers an annual interest payment. The bank then uses the majority of these deposits to lend to other customers for a variety of loans. The difference between the two interest rates is effectively the profit margin for banks. Banks play an important role in the economy for offering a service for people wishing to save. Banks also play an important role in offering finance to businesses who wish to invest and expand. These loans and business investment are important for enabling economic growth.

Banking in its modern sense evolved in the fourteenth century in the prosperous cities of Renaissance Italy but in many ways functioned as a continuation of ideas and concepts of credit and lending that had their roots in the ancient world. In the history of banking, a number of banking dynasties — notably, the Medicis, the Fugger's,

the Welsers, the Berenberg's, and the Rothschilds — have played a central role over many centuries.

Finance is a term for matters regarding the management, creation, and study of money and investments. Specifically, it deals with the questions of how and why an individual, company or government acquires the money needed – called capital in the company context – and how they spend or invest that money. Finance is then often split into the following major categories: corporate finance, personal finance, and public finance

#### 4. Bidding Systems (BDS)

The bidding process is used to select a vendor for subcontracting a project, or for purchasing products and services that are required for a project. Bid records contain the specifications of the project or details of the products and services to be purchased.

A typical bidding process consists of the following stages:

- The project manager or contract/purchasing manager creates a bid that describes the specifications and estimated cost of the project.
- The manager issues the bid.
- (Optional) The reviewers approve the bid.
- The manager sends the bid to a group of vendors for response.
- The vendors analyse the bid and calculate the cost at which they can complete the project. Each vendor responds to the bid with details about the products and services that are needed and the overall cost.
- The manager manages and analyses the bid responses.
- The manager awards the bid to the vendor that best meets the requirements of the project.
- A standard contract is automatically created by using the bid details and response information

#### 5. Employability Consultancy System (EPC)

Employability Consultancy System provide guidance to people making choices about their career. They could help a client who wants to further their career, a client who wants to change career direction, or a client who isn't quite sure what they want.

Employability Consultancy System undertake a wide range of duties including:

- Assessing clients' personal characteristics, skills and interests via one-to-one interviews and/or group sessions
- Providing appropriate help, advice and recommendations based on interviews/test results
- Running workshops
- Offering practical assistance with job seeking, applications/cvs and interviews
- Administering and interpreting psychometric and personality tests
- Helping clients to solve problems and manage their own careers
- Aiding clients in their search for appropriate employment

## 6. Enterprise Resource Planning Systems (ERP)

Enterprise resource planning (ERP) refers to a type of software that organizations use to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations. A complete ERP suite also includes enterprise performance management, software that helps plan, budget, predict, and report on an organization's financial results.

ERP systems are designed around a single, defined data structure (schema) that typically has a common database. This helps ensure that the information used across the enterprise is normalized and based on common definitions and user experiences. These core constructs are then interconnected with business processes driven by workflows across business departments (e.g., finance, human resources, engineering, marketing, operations) connecting systems and the people who use them. Simply put, ERP is the vehicle for integrating people, processes, and technologies across a modern enterprise.

## 7. Fashion Design Systems (FDS)

Fashion Design Software is a computer-aided graphic design tool for creating digital fashion sketches, garment design, textiles, fashion illustration, artwork and other elements related to the design of apparel, footwear, and accessories. The main goal of fashion design software is to help designers / users create digital fashion illustrations that communicate their vision of how a design should look once rendered or manufactured in real life. Fashion Design Software produces the digital blueprint of a design.

## 8. Food & Hospitality Systems (FHS)

Food and Hospitality Services includes businesses and companies that provide a meal outside the home. This can include companies such as restaurants, cafeterias, catering services, and more. Different countries and cultures have different types of service, which ranges from fast food, table and counter service.

## 9. Health & Life Insurance Systems (HLI)

Health insurance is an insurance that covers the whole or a part of the risk of a person incurring medical expenses, spreading the risk over numerous persons. Life Insurance is a contract between an insurance policyholder and an insurance company, where the insurer promises to pay a sum of money in exchange for a premium after a set period or upon the death of an insured person.

While Health Insurance covers the expenses incurred towards treatment, Life Insurance can help your family reduce their financial burden in case of your untimely demise.

### 10. Project management System (PJM)

Managing a project involves many different aspects and many things that have to be tracked and followed up upon. You have to determine project tasks, create a schedule, assign resources, and identify and track issues and risks. A project management system is a means of managing a project by planning, organizing, and managing its different required aspects. Depending on the sophistication of the project management system, it can include:

- Estimation activities
- Scheduling
- Cost control and budget management
- Resource allocation
- Quality management
- Risk management
- Change control
- Decision-making managing

### 11. Publicity & Marketing Management Systems (PMS)

Advertising management (Publicity) is a planned managerial process designed to oversee and control the various advertising activities involved in a program to communicate with a firm's target market and which is ultimately designed to influence the consumer's purchase decisions. Advertising is just one element in a company's promotional mix and as such, must be integrated with the overall marketing communications program. Marketing management is the organizational discipline which focuses on the practical application of marketing orientation, techniques and methods inside enterprises and organizations and on the management of a firm's marketing resources and activities.

### 12. Services Management Systems (SMS)

A service management system (SMS) is an all-encompassing management system meant to bring together all aspects of organization management such as:

- Planning
- Strategies
- Policies
- Objectives
- Documentation
- Processes

It is also the main resource for the design and development as well as the transition into a service-oriented organization that meets its business needs proficiently.

### 13. Stock Exchange Management System (SEM)

A stock exchange, securities exchange, or bourse is a facility where stockbrokers and traders can buy and sell securities, such as shares of stock, bonds, and other financial instruments. Stock exchanges may also provide facilities for the issue and redemption of

such securities and instruments and capital events including the payment of income and dividends. Securities traded on a stock exchange include stock issued by listed companies, unit trusts, derivatives, pooled investment products and bonds. Stock exchanges often function as "continuous auction" markets with buyers and sellers consummating transactions via open outcry at a central location such as the floor of the exchange or by using an electronic trading platform.

Stock Market Management system is to manage investment activities of any organization. Investment in stock market provides major source of income and intelligent decision at right time is the success key. Stock analyser is capable to provide all necessary analysis for right decision.

#### 14. Travel, Tourism & Hospitality Systems (TTH)

Hospitality is a sector which is recognised for a wider service industry, with a focus on leisure, rather than more basic needs. The course in hospitality and tourism equips you with the management, marketing and operational skills within the travel or hospitality arenas.

The opportunities are nearly limitless with a course study in tourism and hospitality. So, what is hospitality and travel? It is a sector which is recognised for a wider service industry, with a focus on leisure, rather than more basic needs. The course in hospitality and tourism equips you with the management, marketing and operational skills within the travel or hospitality arenas. Being that both industries pull different aspects from several other fields, you will partake in an interdisciplinary course of study. In the field of Hospitality and travel, apart from degree courses candidates can also pursue diploma or certificate courses. Some Certificate courses that candidates can pursue in Hospitality and Travel are Certificate course in Certificate in Food and Beverage Service, Air Ticketing & Travel Management, Certificate in Food Production and Patisserie, Certificate in Travel and Tourism Management, as well as similar courses.

#### 15. Automobile Systems (AMS)

Automobile, a self-propelling vehicle may differ in context to design, power, acceleration, measurements, weight, purpose, load capacity, etc but they all have something in common, and it is how to they actually work or the basic idea behind an automobile remains the same.

The basic idea behind the working of an automobile remains the same i.e., an automobile consists of a frame or a body to which all the systems and subsystems attach, an engine, also called as the heart of the automobile that produces power to propel the vehicle, a transmission system to transmit the power to the axle, which delivers the power to the wheels various Automobile Systems: The Frame, The Engine, The Transmission System, The Exhaust System, The Cooling System, The Suspension System.

#### 16. Bookmaker Systems (BMS)

A fantastic innovative bookmaker featuring all sorts of things players require which includes a sports book, betting house as well as reside casino. To get the variety of chunk, on-line athletic competition bet sites would range associated probabilities

like each and every extra at the main topic of each individual match. It is not clear no matter whether Golden Bet ways of go for this nonetheless more compact pair of colleagues associated with Russian-licensed on-line gaming staff the business's common web site delivers bit of in the way connected with an objective article other than to speak about it is around the poker online world-wide-web business. You will discover bookmakers using a small bucks \$1 sporting celebration betting facility in addition to minimal hard-earned cash 1 dinar bet sports books usually are not a new rarity.

The many huge bookmakers may just be challenging with regard to buyers included in that completely new industry together with because of this there can be some amazing features if anyone is adding a person's unsecured right up and also starting point records. There are lots of web-based sports bets websites that have accumulated the have confidence in of such physical activities sporting enthusiasts and are presently counted as one of the best

### 17. Entertainment Management System (ETS)

Entertainment Management Software is one of a kind software in which you can book and manage your event, band, catering service, and venue all at the same time. As an entertainment provider, you are well aware of the myriad of things you need to keep in mind in order to organize the perfect event, and that's where our software can provide organization for all your tasks.

Some of the important features

- Document storage & management
- accounts receivable & payable management
- bill storage and management for your entire company
- e-mail management
- create timelines

### 18. Event Management Systems (EVM)

Event management system helps you to simplify event planning for all your virtual, hybrid and in-person events. Minimizes administrative effort by reducing the steps needed to manage a meeting. Expert users can efficiently create and approve reservations and services, generate, and distribute reports, and take advantage of the full capabilities of the dynamic EVM scheduling platform.

### 19. Healthcare & Well-being Systems (HWS)

A health system, also sometimes referred to as health care system or as healthcare system, is the organization of people, institutions, and resources that deliver health care services to meet the health needs of target populations. Health care, healthcare, or healthcare is the maintenance or improvement of health via the prevention, diagnosis, treatment, recovery, or cure of disease, illness, injury, and other physical and mental impairments in people. Health care is delivered by health professionals and allied health fields. Medicine, dentistry, pharmacy, midwifery, nursing, optometry, audiology, psychology, occupational therapy, physical therapy, athletic training, and other health professions are all part of health care. It includes work done in providing primary care, secondary care, and tertiary care, as well as in public health.



## 20. Mortgage & Pawnbroker age Systems (MPB)

Mortgage, a legal agreement by which a bank, building society, etc. lends money at interest in exchange for taking title of the debtor's property, with the condition that the conveyance of title becomes void upon the payment of the debt.

A pawnbroker is an individual or business (pawnshop or pawn shop) that offers secured loans to people, with items of personal property used as collateral. The items having been pawned to the broker are themselves called pledges or pawns, or simply the collateral.

## 21. Post, freight & cargo management system (PFC)

Cargo Management System is a web-based application designed to computerize the various operations in cargo agencies. It aims at managing and implementing activities and plans of a cargo company. In order to reduce the manual work and to create a reliable working platform, computerized cargo management system is an essential component for all cargo agencies these days.

The cargo management system application performs multi-task in effective management of cargo companies. The major aim of the generated application from the project is to reduce the manual work and provide fast, comfortable, reliable, and effective service. The software can record data in the database, display billing details, inquire modules, and many more. As the implementation of software in cargo agencies reduces the number of workers and paper works, it ultimately minimizes the overall expenditure of the company. Moreover, it helps the company in its promotion through web technology. A freight management system helps shippers streamline supply chain operations, simplify the shipping process, and increase logistical efficiency. ... Also known as a transportation management system, freight management systems allow shippers to: Book orders instantly. Find the best carrier rates.

## 22. Real Estate Management Systems (REM)

Real Estate Management System (REMS) is an online real estate software application that manages the overall operational activities and processes, starting from the management of the property to the management of real estate agencies, agents, clients, and financial transactions. It provides comprehensive reports for managing the Real Estate agency performance and efficiency and enables the management for a better decision-making.

## 23. Rental Systems (RES)

Rental management software helps you manage bookings, inquiries, availability and more- all from a single platform. We provide innovative solutions for payments, maintenance, and channel management.

## 24. Space & Aesthetics Management Systems (SAM)

The management of your space inventory includes tracking and maintaining your space and occupancy information—identifying who sits where, understanding how much

space your organization has, and how it's actually being used, and projecting and forecasting how much real estate you will need in the future.

## 25. Supply Chain Management Systems (SCM)

Supply chain management is the management of the flow of goods and services and includes all processes that transform raw materials into final products. It involves the active streamlining of a business's supply-side activities to maximize customer value and gain a competitive advantage in the marketplace. SCM represents an effort by suppliers to develop and implement supply chains that are as efficient and economical as possible. Supply chains cover everything from production to product development to the information systems needed to direct these undertakings.