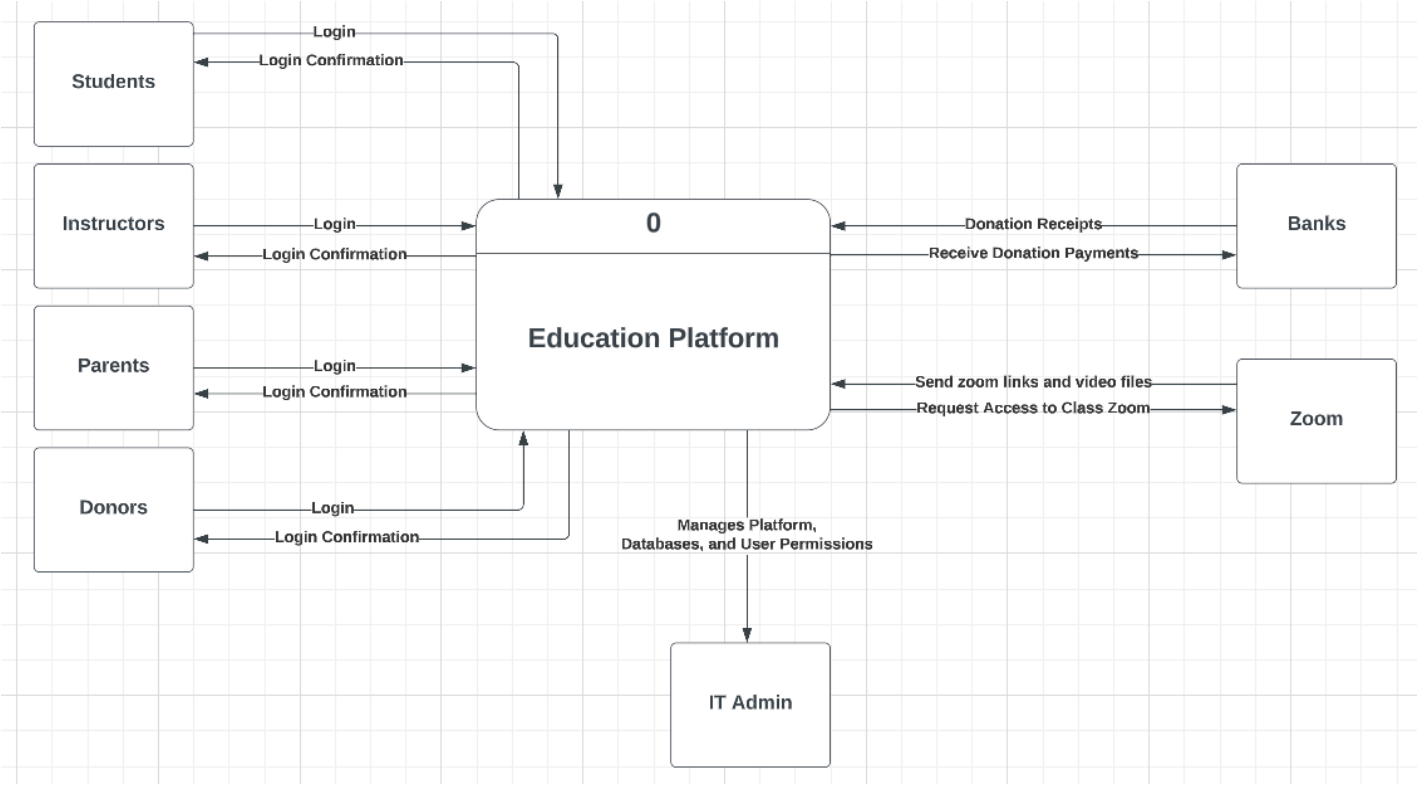
[Group 2] Deliverable 3: Logical Design

Eric Nguyen, Alfred Njunge, Andrew Yang, Sarthak Dhomne, Pragya Badola

3.1 Key External Entities & Inputs

Context Diagram [Eric Nguyen]



External Entities & Inputs Requirement [Eric Nguyen]

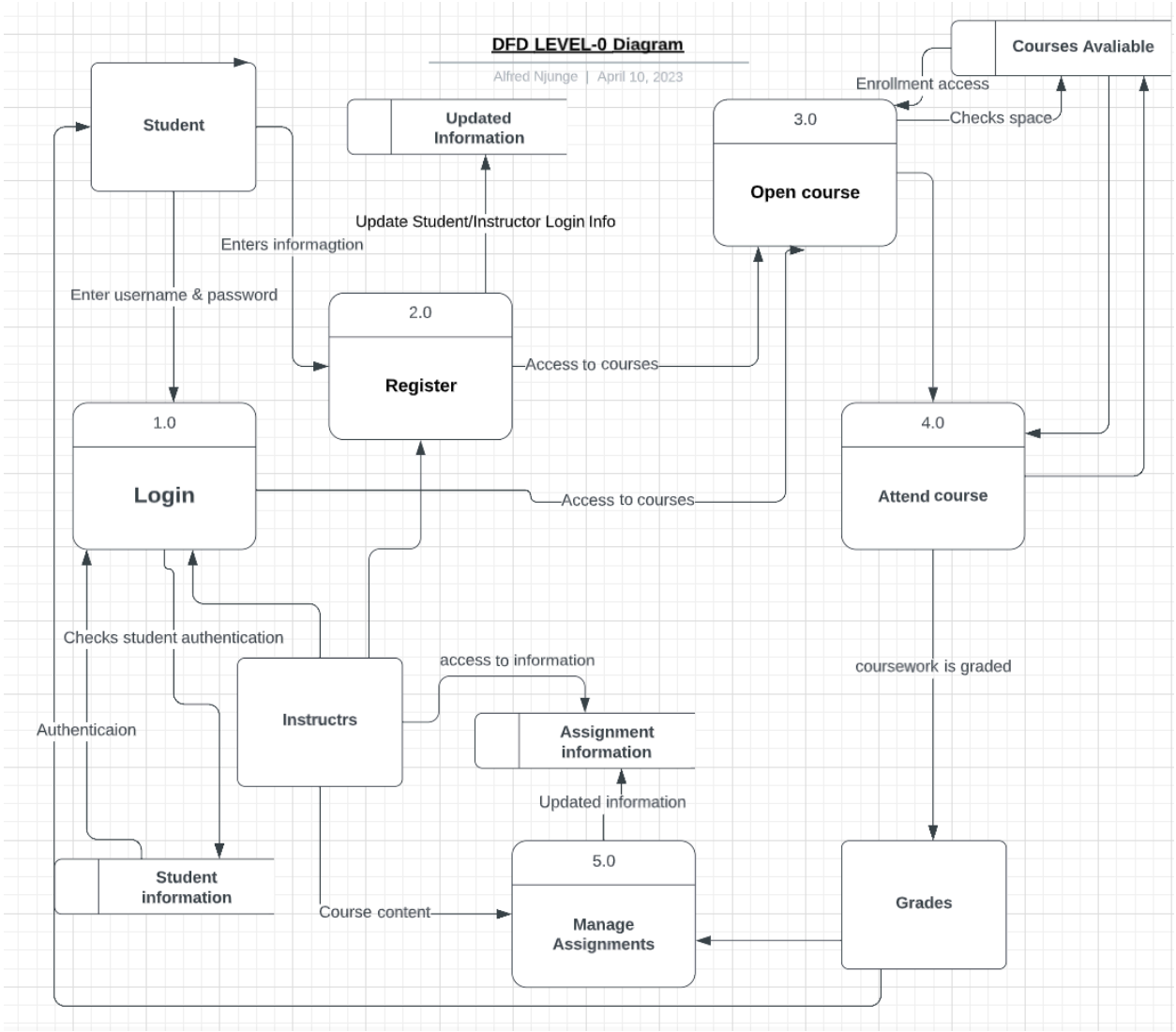
a. Key External Entities:
   i. Students
      - Utilizes learning platform
   ii. Instructors
      - Manages students grades
      - Uploads assignments to platform
   iii. Parents
      - Access students' grades
   iv. IT Admin
      - Establishes a clear process in managing all assets from inventory to financials
      - Responsible for communication with the bank in order to safely deposit and withdraw funds
   v. Donors
      - Makes donations to education platform
   vi. Banks
      - Connects donations from donors to the education platform

- Allocation of funds into one account for use
- Directly deposits donors' donations into account once transaction has been successfully processed

b. Key Inputs:
    i. Data Source: Students, Instructors, Parents, Donors
    ii. Sink: Banks, Zoom, IT Admin

3.2 Data Flow Diagram Level-0

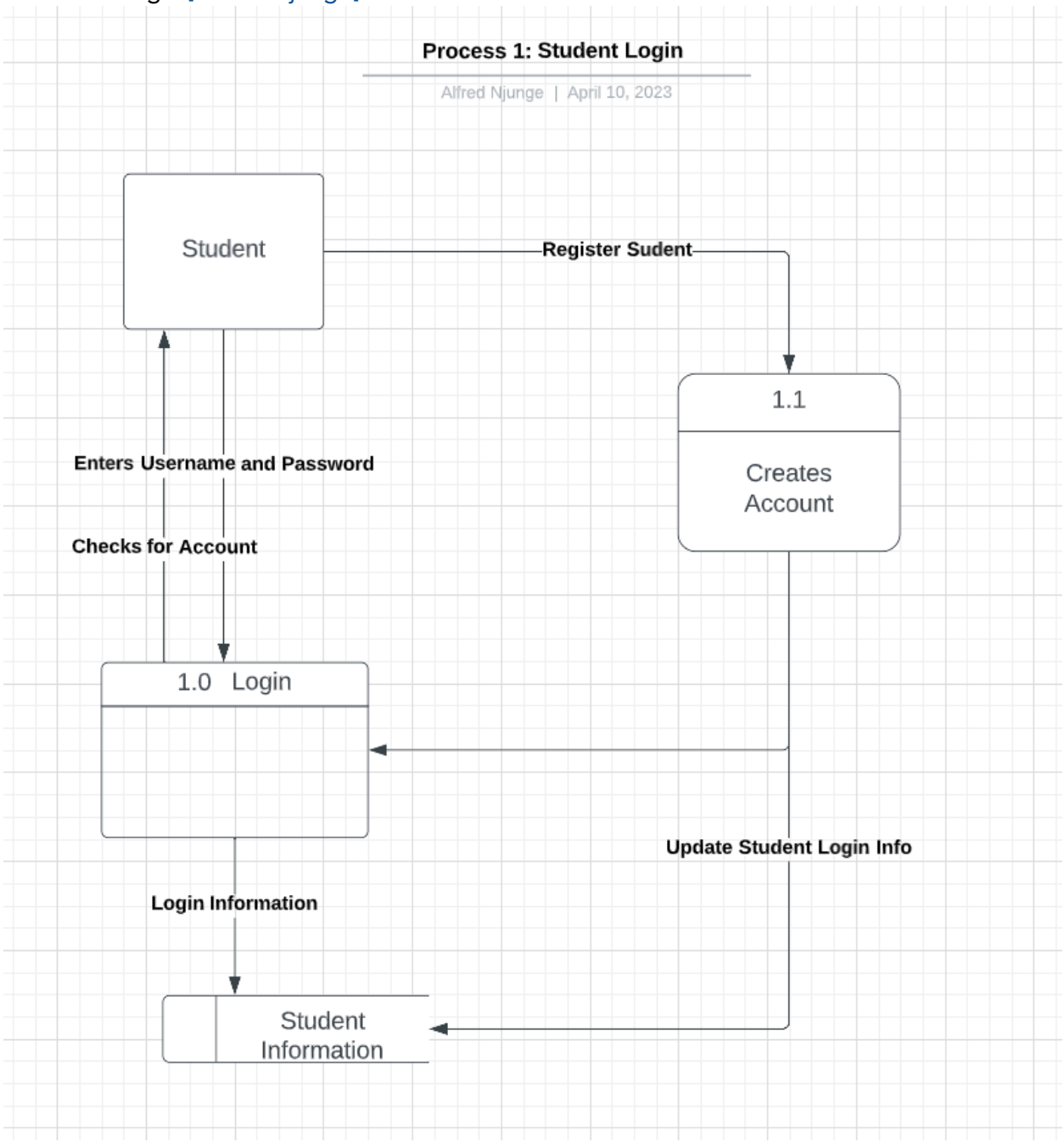
DFD LEVEL-0 Diagram [Alfred Njunge]



3.3 Data Flow Diagram Level-1

DFD LEVEL-1 Diagram: Major Activities & Decomposition

Process 1: Login [Alfred Njunge]

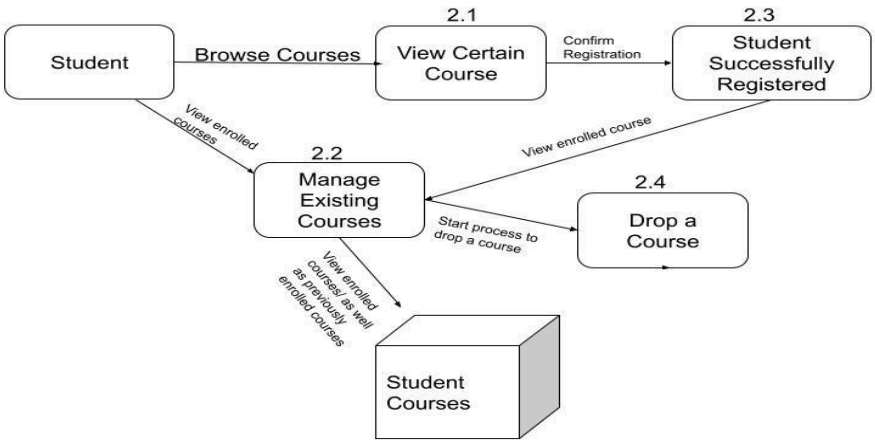


Data Dictionary [Alfred Njunge]

Sources/Sinks:	Sub-Processes:
Student: Is able to login or create an account	Login : Student enters username and password

	Creates Account: Student enters new username and password that will be updated in the student Login Info
Data Flows:	Data Stores:
Enters Username and Password: Student input username and password Checks for Account : Examines if the username and password already exists within the database Update Student Login Info: Updates the database containing student login info with new information Login Information: Gathers all necessary information for access to Student information	Student Information: A database that stores the Student information

Process 2: Register for Courses [Pragya Badola]

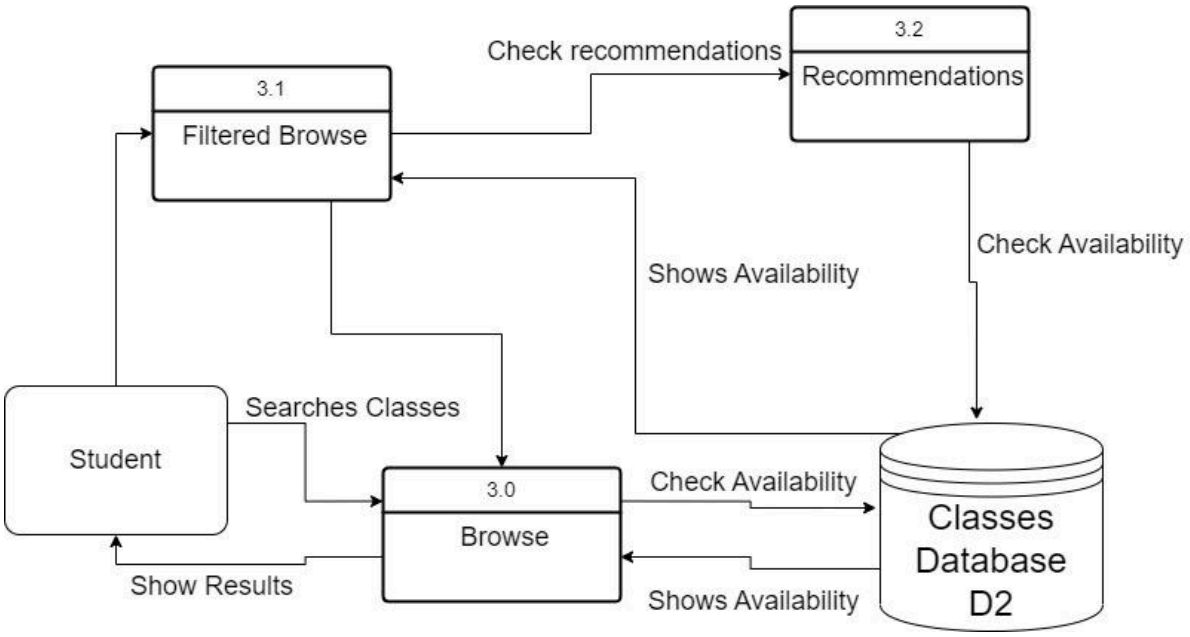


Data Dictionary [Pragya Badola]

Sources/Sinks:	Sub-Processes
Student: Can access existing courses they are enrolled in and enroll in new courses.	View certain course: Allows the student to get a deeper insight of the course and what is expected of them before enrolling. Manage existing courses: Allows the student to view currently enrolled classes as well as classes they were previously enrolled in. Student Successfully Registered: Allows the student to secure a spot in the class. Drop a course: Allows the student to view currently enrolled classes that they want to drop, and open up their spot in the class.
Data Flows:	**Data Stores:**
Browse Courses: Allows for the student to browse the list of courses that are available to them. Confirm Registation: Lets the student view the course before they confirm registration, so in case the student wants to drop the course they can do so here with out it showing up in the data store. View Enrolled Courses: Shows a list of current enrolled courses that the student is currently in..	Student Courses: A database system that stores what classes each student has enrolled in, dropped/widthdrew from, and courses they have already completed along with their grade.

Start the Process to drop a course: Allows the student to confirm whether they want to drop the course.	

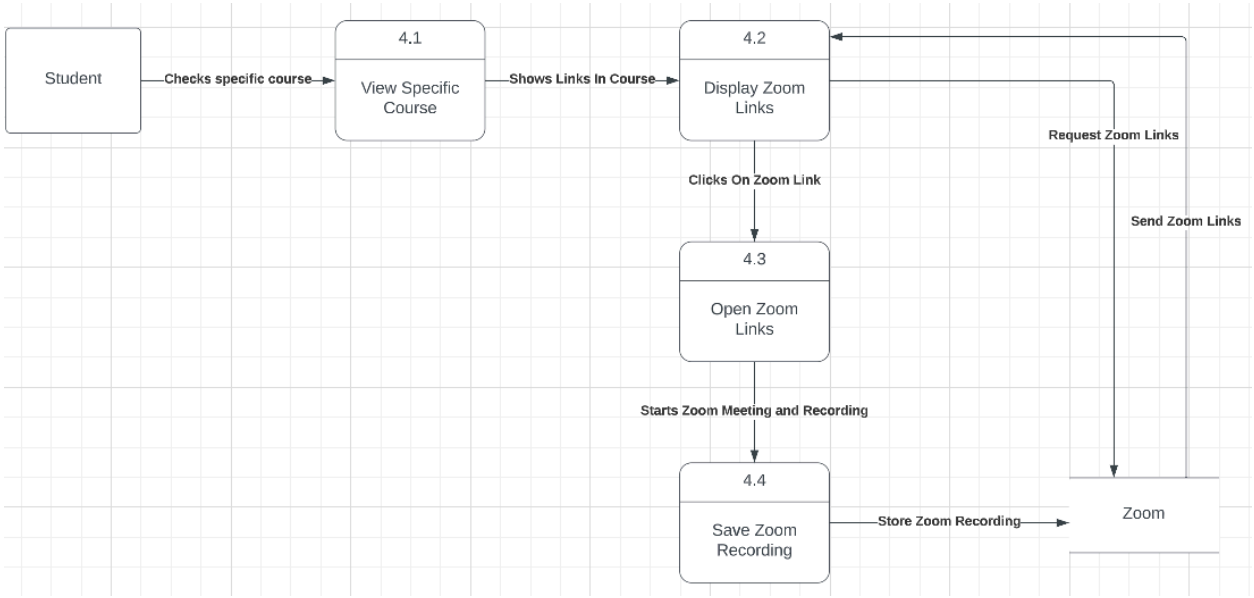
Process 3: Browse Courses [Sarthak Dhomne]



Data Dictionary [Sarthak Dhomne]

Sources/Sinks:	Sub-Processes
Student: Searches with appropriate information to get availability and info of desired classes.	Browse : Website will check for availability of desired classes and display it Filtered Browse : Website will check for availability of classes based off filtered being used, such as subject, units, etc, and display it Recommendations: checks for classes based off of filter and student transcript/information
Data Flows:	**Data Stores:**
Filter being used: Student inputs preference(s) into filter User Class Search: Customer will search for desired recipe on website Checks Recommendations: Checks for availability of classes based off of filter Checks quantity: Checks for availability of inventory Filter Checks Classes: Examines classes based off of filter preference(s) Shows availability inventory: Displays if classes is available Displays availability: Shows classes on website Display Classes: Shows desired classes	Classes Database: Database that stores all the Classes and information

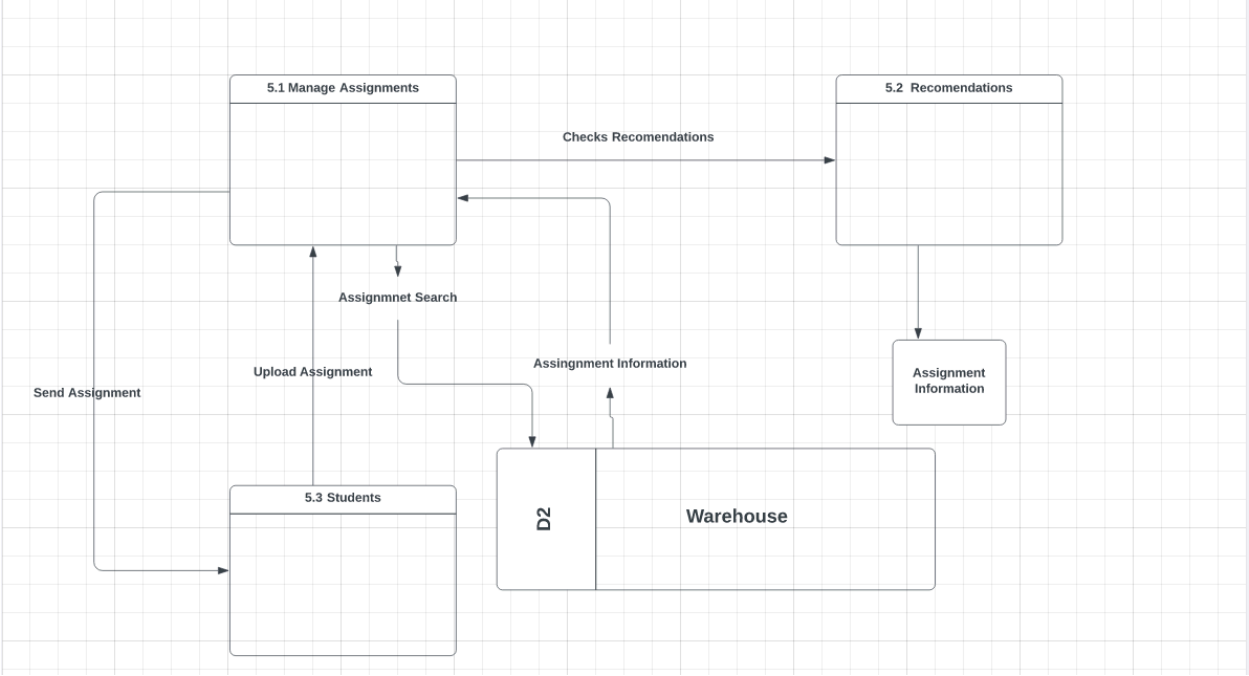
Process 4: Attend Course [Eric Nguyen]



Data Dictionary [Eric Nguyen]

Sources/Sinks:	Sub-Processes
Student: Checks for courses in user's education platform dashboard	View specific course: Displays course portal opened from the dashboard. Display zoom links: Displays zoom links related to the course Open zoom link: Sends user to zoom meeting Save zoom recording: Saves zoom meeting to the database and allows students to access them again at a later date.
Data Flows:	**Data Stores:**
View Specific Course: Displays course Display related links: Display zoom links Send User to Zoom meeting: Opens zoom link to zoom meeting Return to Course Dashboard: returns student to dashboard	Zoom: Stores all zoom meeting recordings

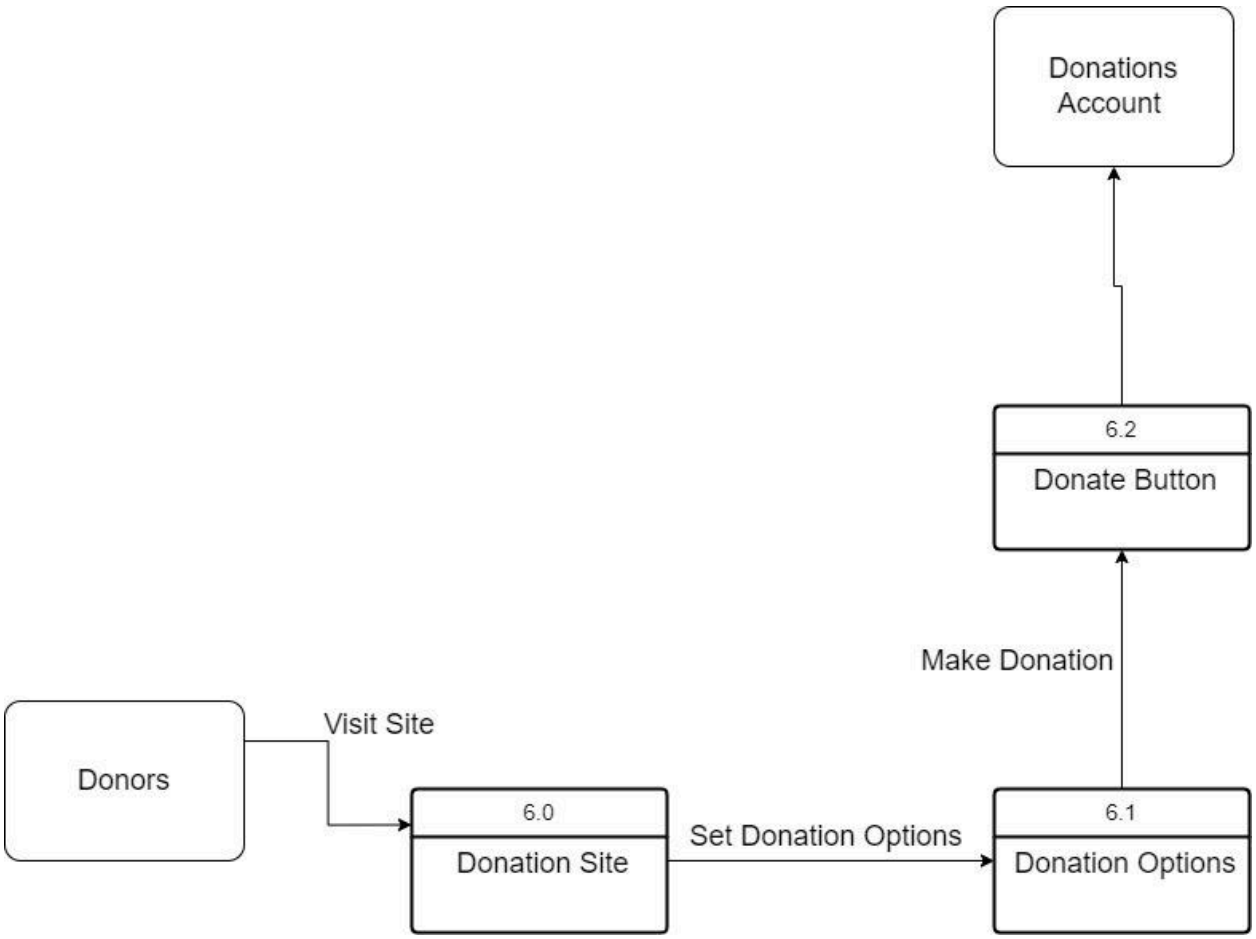
Process 5: Manage Assignments [Andrew Yang]



Data Dictionary [Andrew Yang]

Sources/Sinks:	Sub-Processes:
Assignment Information: Contains information of Assignment	Manage Assignment: Edits the assignment with updated information Recommendations: Checks for assignment based off of filters Students: Students upload assignments
Data Flows:	**Data Stores:**
Checks recommendations: Checks for availability of assignments based off of filter Assignment Information: contains information of assignments Assignment Search: searches for assignments necessary for Students Upload Assignment: Student uploads their own Assignment Send Assignment: sends the student their assignment.	Warehouse: Database that stores all of Sales and Inventory information

Process 6: Make Donations [Sarthak Dhomne]

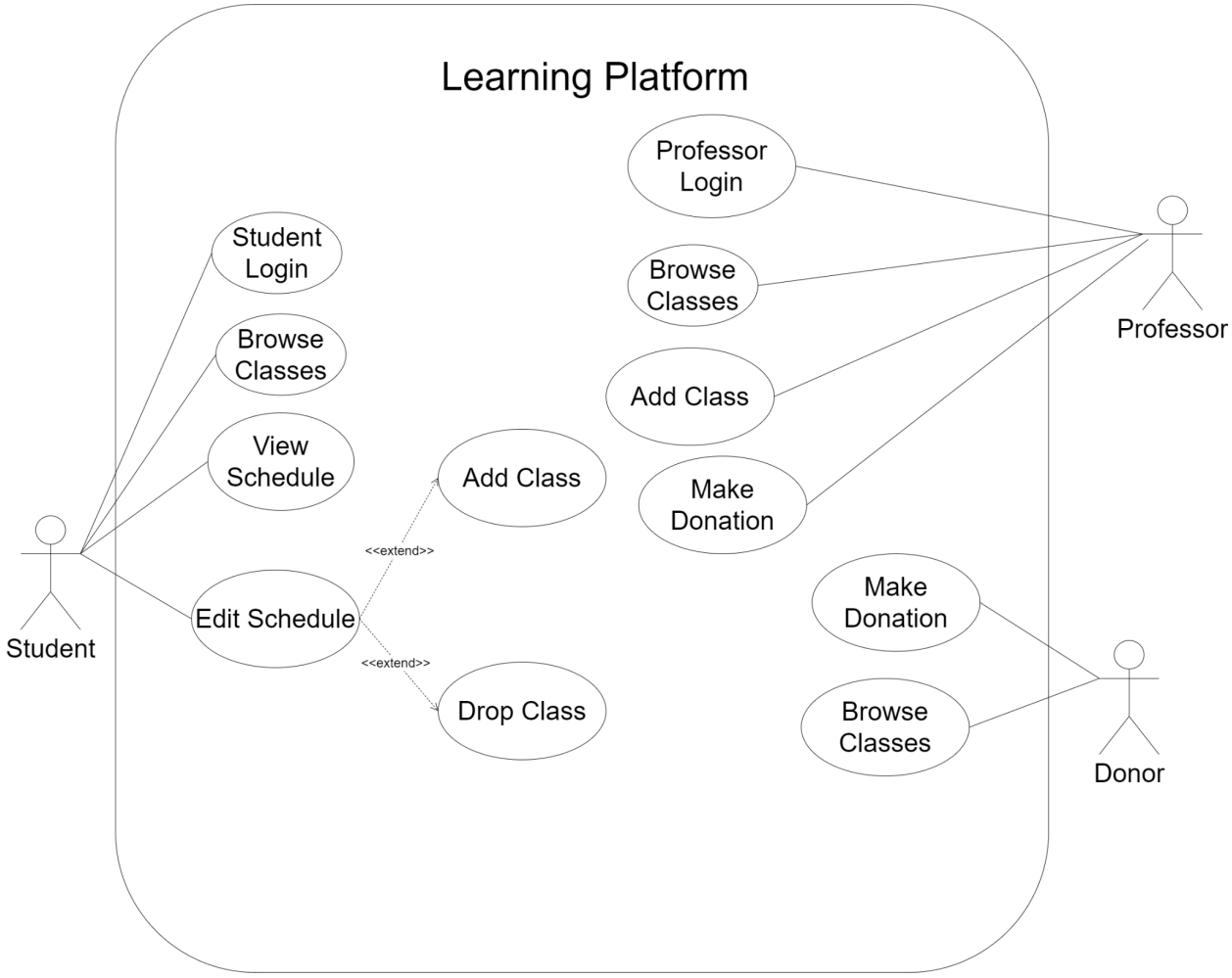


Data Dictionary [Sarthak Dhomne]

Sources/Sinks:	Sub-Processes:
Donors: Can visit donation site to make donations as wanted.	Receive Donation Confirmation: receive a confirmation message/receipt of donation
Data Flows:	Data Stores:
Visit Site: Go to the donation site Set Donation Options: Specify donation amount, type of payment, etc Make Donation: Donate with the appropriate options	Donations Account: Account that stores money received from donations.

3.4 Use Cases Development

Top-Level Use Case Diagram [Sarthak Dhomne]


Learning Platform
Professor Login
Student Login
Browse Classes
Add Class
Make Donation
Professor
Browse Classes
View Schedule
Add Class
<<extend>>
Student
Edit Schedule
<<extend>>
Drop Class
Make Donation
Browse Classes
Donor

Use Case Narratives [Eric Nguyen]

1. *Customer Login*

Use Case ID:	001	Version:	<1.0>
Use Case Name:	Login	Date:	4/10/23
Use Case Objective:	Allows users to login in order to access the education platform.		
Primary User/Actor:	Student		
Trigger:	Students requests access to their account on the website.		
Preconditions:	Students must open the website through a URL and already have an account.		
Post-conditions:	Login credentials are authenticated and verified, allowing access to services.		

Basic Flow

Step	User Actions (Inputs)	System Response (Outputs)
1	Student inputs their username and password correctly	- System will verify credentials, confirming if username and password combination exists and accepts the customer's login. The student is allowed into the site.

Alternate Flow

Alt	User Actions	System Actions
1	Student enters the wrong username or password	- System rejects the customer's login and notifies them that their login failed. - After three failed tries, system will tell the student to reset their username or password.

Use Case Notes

Special Requirements	Students must have an account on the website to log in.
Business Rules	Student's account information (username, password, name, email) will be stored privately.

2. *Register for Courses*

Use Case ID:	002	Version:	<1.0>
Use Case Name:	Register for Courses	Date:	4/10/23
Use Case Objective:	Allows students to browse course catalog and register for class		
Primary User/Actor:	Student		

Trigger:	Customer makes a change on the profile.
Preconditions:	Customer needs to be logged into their account.
Post-conditions:	System updates customer profile information based on what the customer edited.

Basic Flow

Step	User Actions (Inputs)	System Response (Outputs)
1	Users access their profile and update it by inputting any information they wish to add or remove.	- System displays updated information on the customer profile.

Alternate Flow

Alt	User Actions	System Actions
1	Customer does not enter valid information or does not save changes.	- System does not update information, prints out error messages.

Use Case Notes

Special Requirements	Customer must log in, enter valid information, and save the changes to update their profile.
Business Rules	Customer's new account information (username, password, email, phone number) will be stored privately.

3. Open Course

Use Case ID:	003	Version:	<1.0>
Use Case Name:	Open Course	Date:	4/10/23
Use Case Objective:	Allows students to go through the education platform and view all the courses they have registered for.		
Primary User/Actor:	Students		
Trigger:	Student navigates to their education platform's dashboard		
Preconditions:	Students log into their account successfully.		
Post-conditions:	The education platform is fully accessible to the student.		

Basic Flow

Step	User Actions (Inputs)	System Response (Outputs)
1	Students goes through the education platform's dashboard to access homework, notes, grades, etc.	- System loads each portal that the user selects.

Alternate Flow

Alt	User Actions	System Actions
1	Students try to access multiple portals all at once.	- System presents an error page.

4. Attend Courses

Use Case ID:	004	Version:	<1.0>
Use Case Name:	Attend Courses	Date:	4/10/23
Use Case Objective:	Allows students to view which zoom links in specific courses		
Primary User/Actor:	Student		
Trigger:	Students views the zoom links that appear on the portal of the course they click on.		
Preconditions:	Student has finished registering for the course..		
Post-conditions:	System takes the student from the course portal to their zoom meeting.		

Basic Flow

Step	User Actions (Inputs)	System Response (Outputs)
1	Students access the course portal to view what zoom links are available	- System displays the zoom links in the dashboard

Alternate Flow

Alt	User Actions	System Actions
1	Student opens zoom link.	- System opens up zoom meeting in a different window

5. *Manage Assignments*

Use Case ID:	005	Version:	<1.0>
Use Case Name:	Manage Assignments	Date:	4/10/23
Use Case Objective:	Allows instructors to make alterations to the assignments		
Primary User/Actor:	Instructor		
Trigger:	Instructor makes changes to the assignments or creates new ones on the education platform.		
Preconditions:	Instructor chooses to make changes to an existing assignment or upload a new assignment.		
Post-conditions:	Updates the database with the new assignments added to the course.		

Basic Flow

Step	User Actions (Inputs)	System Response (Outputs)
1	Instructor changes an existing assignment or uploads a new assignment	- The system uploads the assignment to the education platform's database and system updates the courses - The system displays the assignments when available..

Alternate Flow

Alt	User Actions	System Actions
1	Assignment alteration or upload cannot be processed	- The system displays an alert telling the Instructor the alteration or upload cannot be made and asks the instructor to upload a different assignment.

Use Case Notes

Special Requirements	Instructor must have an existing account on the education platform to be able to make changes to or upload a new assignments
Business Rules	The assignment the instructor uploads must not contain any harmful or illegal items.

6. *Make Donations*

Use Case ID:	006	Version:	<1.0>
Use Case Name:	Make Donations	Date:	4/10/23
Use Case Objective:	Allows donors to make donations as they'd like and collect those.		

Primary User/Actor:	Donor
Trigger:	Donors place donation based on their preferences.
Preconditions:	Donors must open the website through a URL
Post-conditions:	Donors have selected their preferences and pressed the donate button.

Basic Flow

Step	User Actions (Inputs)	System Response (Outputs)
1	Donors visit the site	- Site responds and displays options for amount, type, etc.

Alternate Flow

Alt	User Actions	System Actions
1	Donor does not fill in donation options	- System rejects the donors donation and notifies them that to fill in option. - After filling in missing options, donation goes through.

Use Case Notes

Special Requirements	Just a web browser is needed to visit the site and make a donation.
Business Rules	Donor's donation and details will be stored privately.

Group Roles:

3.1 Key External Entities & Inputs

Context Diagram… Eric Nguyen

External Entities and Inputs Requirement… Eric Nguyen

3.2 Data Flow Diagram Level-0

DFD-0 Level-0 Diagram… Alfred Njunge

3.2 Data Flow Diagram Level-1

DFD-1 Level 1 Diagram

Process 1: Login

Diagram… Alfred Njunge
Data Dictionary… Alfred Njunge
Process 2: Register for Courses
Diagram… Pragya Badola
Data Dictionary… Pragya Badola
Process 3: Open Courses
Diagram… Sarthak Dhomne
Data Dictionary… Sarthak Dhomne
Process 4: Attend Courses
Diagram… Eric Nguyen
Data Dictionary… Eric Nguyen
Process 5: Manage Assignments
Diagram… Andrew Yang
Data Dictionary… Andrew Yang
Process 6: Make Donation
Diagram… Sarthak Dhomne
Data Dictionary… Sarthak Dhomne

3.4 Use Case Development

Use Case
Use Case Diagram… Sarthak Dhomne
Use Case Narrative… Eric Nguyen

Reviewers:

1. Eric Nguyen
2. Alfred Njunge