**The Igloo**

*Semester Report*

Alex Indihar and Jonathan Shields

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**Section 1: Topic and Informal Design**

**Overview of Section:**

This section is going to be responsible for introducing the topic of the entire project as well as providing an English description of how the database application will relate to the topic. This section will also provide information on the system environment, operation system, and the programming environment and language. The project plan and the responsibilities of each group member will also be covered in this section.

**Topic of the Project:**

**What we are doing:** We are creating an online website that will allow people to create custom made smoothies that they can pick up at a local store or have delivered right to their door steps. This website will contain features that are common to other well known ordering sites such as Dominoes and Pizza Hut. From the website, users will be able to create an account, create their own smoothie, and decide rather or not they would like to pick the smoothie up or have it delivered.

**The Igloo Database:** In addition to creating the online website, we are also going to create a database in order to store all of the information generated from the people using the website. This database is going to be online and is called Igloo. The IGLOO database will keep track of all of the orders that are made online as well as store certain orders that are tailored to customers. In the end, the IGLOO database is going to allow people to order tasty cold treats anytime during the day.

**English Description of Database:**

* The Igloo database is only going to be accessible to three types of users: Admin, Registered Users, and Casual Users. Each user is going to live in a specific “paradigm” inside the Igloo Database.
  + - * Admin: The admin is going to live in the “Menu” paradigm of the database. The admin is going to have the ability to add items or remove items from the database. For example, an administrator can go on the database and add new items to the menu giving them a price or an administrator can remove certain item from the menu.
      * Registered Users: Registered Users are going to live in the “Account” and “Receipt” Paradigm. Registered users will have the ability to have their last order saved on the system as well being able to receive certain discounts. For example if a certain user love a specific type of smoothie, then he or she will be able to log on the application and click order without having to go to the process of making that order again.
      * Casual Users: Casual Users are going to live in the “Receipt” Paradigm. Every order that is made by a casual user is going to be stored in the Igloo Database
* The Igloo database is organized into three different paradigms: Receipt, Menu, and Account.
* Receipt Paradigm: In this paradigm the database is going to store all of the orders that are made online. Each order is going to contain a unique ticket number as well as the first name, last name, address, what was ordered, payment option, and the date and time the order was placed.
* Account Paradigm: In this paradigm the database is going to store all of the users who have made an account on the website. Each account is going to have a unique username. The account is going to store specific information (first name, last name, address, payment option) for the registered user.
* Menu Paradigm: In this paradigm the database is going to store all of the items that are included on the menu. Each item is going to have a unique ID associated with it as well as the price of the item.

**System Environment:**

The system environment is going to be Windows Desktop.

**Operating System:**

We are creating this application using Windows 10. Since our application is going to be web based, it should work on all operating systems.

**Programming Environment:**

We are going to use Notepad++ for our programming environment.

**Language:**

We plan on using multiple languages for this application. SQL is going to be used to interact with the online database. HTML is going to be used along with CSS for the formatting of the web site. PHP is going to be used as well and will serve as the main driver for the entire application connecting all of the modules together.

**Project Plan:**

**Planning Phase:** January 8, 2017 to January 31, 2017

Activities to Complete:

-Figuring out how we are going to approach this project.

-Deciding on the platform to create the project

-Deciding on the language to use for the project

Deliverables:

-Having a blueprint and game plan for creating this project

Milestone:

-Getting started on the creation of the application

**Creating Phase:** February 1, 2017 to February 28, 2017

Activities to Complete:

-Getting the foundation of the application working

-Making a program that can store registered users accou nts as well

as make orders. Also being able to change the items on the menu

Deliverables:

-A prototype version of the application

Milestone:

-Being able to implement the features

**Features/Testing Phase:** March 1, 2017 to April 10, 2017

Activities to Complete:

-Including additional features that will make our application unique

-Testing all of the additional features

-Fixing any bugs that may come up in the application

Deliverables:

-Finished Application

Milestone:

-Presenting the final product to the class

**Responsibilities of Each group member:**

This project is going to be developed by two developers Alex Indihar and Jonathan Shields. Since this is a two member project, responsibilities are going to be split evenly between the two members.

**Responsibilities for Alex Indihar:**

-Creating the website

-Formatting the layout of the website

-Connecting the Database Online

-Interacting the database with the website

-Contributing to the semester report

-Managing the online Database

**Responsibilities for Jonathan Shields:**

-Creating the website

-Formatting the layout of the website

-Connecting the Database Online

-Interacting the database with the website

-Contributing to the semester report

-Managing the online Database

**Section 2: Formal Description and Implementation**

**Overview of Section:**

This section is going to be responsible for describing the formal description of the IGLOO database as well how it is going to be implemented in terms of relations. An ER model is being used in order to describe the conceptual model of our database. The ER model is going to list the entity types and the attributes that are associated to each entity type. Towards the end of this section we are going to take the values from the ER diagram and map them into the relations for the database.

**Listing Entity Types for the Database**

1. tbAccount
2. tbOrder
3. **Item Order**
4. tbMenu
5. Custom Menu

**Explanation of Entity Types**

**tbAccount:** tbAccount is an entity that represents registered users. Customers will have the option to apply for an account on the website. The moment the customer apply for an account they become a registered user and all of their information will be stored. Registered users will have an easier time placing an order online.

**tbOrder:** tbOrder is an entity that represents a receipt. This entity is going to be used to describe two things: what was ordered from the menu and who placed the order. Every order that is made online is going to be represented by this entity.

**Item Order:** Item Order is an entity that represents an order in the database. Item Order is a class that contains two subclasses a custom item or a specialty item. Whenever an order is made, users will have to specify if they would like a custom item or a specialty item.

**tbMenu:** tbMenu is an entity that represents the menu of the restaurant that contains the specialty items. Specialty items are items that are going to change throughout the year depending on the seasons and special holidays. tbMenu is a subclass to Item Order and will inherit all of the attributes that are included in Item Order.

**Custom Menu:** Custom menu is an entity that represents the menu of the restaurant that contains the standard items. Standard items are items that are going to stay the same throughout the year. Customers can always expect these items to be here. Custom Menu is a weak entity because it does not have any key attributes. Since Custom Menu is a weak entity every entity in the collection must be in total participation with the tbOrder entity. This will make tbOrder the owner of Custom Menu; therefore, every entity in the Custom Order type belongs to tbOrder. Custom Menu is subclass to Item Order and will inherit all of the attributes that are included in Item Order.

**Listing Attributes for tbAccount**

* Email(Primary Key)
* Password
* Fname
* Lname
* Address
* Phone
* Card Number (unique)
* Security Code
* Expire Date
* Card Name

**Explanation of Attributes for tbAccount:**

**Email**(Primary Key): The username for each registered user is going to be their email address. By default this attribute will be unique because emails are unique and cannot share the same name. This will also provide a way to send special announcements and discounts to every user that has an account with the database. This will be an atomic, single-valued, and stored attribute.

**Password**: Registered users will have their own password that will be use to log in to their accounts. This will be an atomic, single-valued, and stored attribute.

**Fname**: This attribute will store the first name. Whenever a user log into the account his/her first name will be displayed on the screen. This will be an atomic, single-valued, and stored attribute.

**Lname**: This attribute will store the last name. Whenever a user log into the account his/her first name will be displayed on the screen. This will be an atomic, single-valued, and stored attribute.

**Address**: The location of where the user would like the smoothie to be sent to is going to be stored on the database as well. This will be an atomic, single-valued, and stored attribute.

**Phone**: The phone number is going to be used to let the user know whenever the order is ready. This will be an atomic, single-valued, and stored attribute.

**Card** **Number** (unique): Registered users will have the option to store their credit card information. If they decide to then their card number is going to be stored. This will be an atomic, single-valued, and stored attribute.

**Security** **Code**: The security code on the card is going to be stored. This will be an atomic, single-valued, and stored attribute.

**Expire** **Date**: The expiration date on the card is going to be stored. This will be an atomic, single-valued, and stored attribute.

**Card** **Name**: The name on the card is also going to be stored. This will be an atomic, single-valued, and stored attribute.

**Listing Attributes for tbOrder**

* Order Number (Primary Key)
* Order Time (Primary Key)
* Order Style
* Order Type
* Email
* Phone
* Order Price
* Pay Style
* Card Number

**Explanation of Attributes for tbOrder:**

**Order** **Number** (Primary Key): Every time an order is placed online the order number is going to increase. The Order Number is going to keep track of current total of how many times an order has been ordered from the website.

**Order** **Time** (Primary Key): The order time is going to document the exact time an order was place online.

**Explanation on the key** (Order Number, Order Time): Both the Order number and the Order time are going to serve as the primary keys for the tbOrder entity. Customers are able to select multiple items within one order. For example, a customer can select a strawberry smoothie and a blueberry smoothie and both items will share the same order number. However the times will be different for each item because of how the website is designed. Therefore both attributes will be used to uniquely identify every entity in the collection. And the Order Number attribute can be used to see all of the items that were included within the order.

**Order** **Style**: Order style is going to let us know if the user ordered takeout or delivery.

**Order Type:** Order type is going to let us know if the user ordered a specialty item or a custom item

**Order** **Price**: This is going to present the total price of the time.

**Pay** **Style**: Pay style is going to let us know if the user decided to pay in cash or with a credit card.

**Card** **Number**: If the user decided to pay with a card then the credit card number will be stored in the database as well.

**Listing Attributes for Item Order**

* Item Type
* Item Size

**Explanation of Attributes for Item Order**

**Item** **Type**: This attribute is going to be let the database know if a custom item or specialty item was selected.

**Item Size:** This will represent the size of the item. All items on the menu can be purchased for small, medium, or large. This will be an atomic, single-valued, and stored attribute.

**Listing Attributes for tbMenu**

* Item Price
* Item Description
* Item Name

**Explanation of Attributes for tbMenu:**

**Item** **Price**: This will list the price of the specialty item. This will be an atomic, single-valued, and stored attribute.

**Item** **Description**: This will include a description of the specialty item describing all the ingredients that is included with it. This will be an atomic, single-valued, and stored attribute.

**Item** **Name**: This attribute is going to be the name of the specialty item or the custom item that we have available for the customers. This will be an atomic, single-valued, and stored attribute.

**Listing Attributes for Custom Menu**

* Flavors
* Toppings
* Item Name

**Explanation of Attributes for tbMenu:**

**Flavors:** This will represent the flavor of the smoothie. There will be many flavors to choose from and customers will have the ability to mix their flavors. As a result, this will be an atomic, multi-valued, and stored attribute.

**Toppings:** This will represent the toppings that the customers can put on their smoothie. There will be many toppings to choose from and customers will have to ability to add more than one topping on their smoothie. As a result, this will be an atomic, multi-valued, and stored attribute.

**Item** **Name**: This attribute is going to be the name of the specialty item or the custom item that we have available for the customers. This will be an atomic, single-valued, and stored attribute.

**Explanation of the Class Hierarchies, Specialization, and Categories**

Item Order

tbMenu

Custom Item

Specialization was used to define the two subclasses, Custom Item and tbMenu, from the entity type Item Order. We first start with the item order as our super class of the specialization. Every order is going to have an item associated with it. Each item is going to have a name and size. We can further break down an item base on rather or not it is a special item or a custom item. Special items are going to be seasonal and will include a description of the item and a base price tied to it. Custom items are going to be the items that user makes from scratch and each item will include flavors and toppings.

For this database application we are going to have one class. That class is **Item Order**. Every time a user orders from the website an instance of this class is going to be created. There are subclasses that are going to be associated with **Item Order** and subclasses are **Custom Item** and a **Specialty Item**. An item from Item order is either going to be a specialty time that will be around for a season or an item that is custom made to the needs of the customer.

**Explanation of the Relationships between Entities**

**N**

**1**

orders

tbOrder

tbAccount

**Oders Relation:** Orders is a 1:N (one to many) relationship type between tbAccount and tbOrder. Both entities have a partial participation with the relationship. Registered users do not have to make an order online and every order that is made online does not have to be come from a registered User. Registered Users have the option to place as many orders as they like (one account can have many orders). However, each order is tied to one person (rather that person is a registered user or not).

order

1

N

Item Order

tbOrder

**Order Relationship:** Order is a 1:N (one to many) relationship type between Item Order and tbOrder. Both entities have a partial participation with the relationship. It is possible for an entity in the Item Order category to never appear in the tbOrder entity. For example, if nobody orders a specialty or custom item then than particular itemw ill never appear in the tbOrder entity. Items from the Item Order entity may appear more than once in the tbOrder collection. However, each entity in tbOrder will contain one item from the Item Order entity.

tbAccount

**1**

Orders

**N**

tbOrder

**N**

Order

**1**

tbMenu

Item Order

Custom Item

**Mapping the ER diagram to relations**

**tbAccount(**Email, Password, First Name, Last Name, Address, Phone, Card Number, Security Code, Expiration Date, Card Name**)**

**tbOrder(**Order Number, Order Time, First Name, Last Name, Address, Order Style, Order Type, Email, Phone, Item Name, Item Size, Flavors, Toppings, Order Price, Pay Style, Card Number, Security Code, Expiration Date, Card Name**)**

**tbMenu(**item name, item Description, Item Price**)**

**Explanation of Mapping the ER to a relational schema:**

**tbAccount:** Creating the tbAccount relation from the ER diagram was pretty straightforward. The name of the relation reflects the name of the entity type in the diagram. All of the attributes that were included in the ER diagram are also included in this relation. The email attribute is going to serve as the primary key for the relation.

**tbOrder:** Creating the tbOrder relation from the ER diagram was also straightforward. The name of the relation reflects the name of the entity type in the diagram. All of the attributes that were included in the ER diagram are also included in this relation. The order number and order time attributes are going to serve as the primary key for the relation. The email attribute is a foreign key that is going to reference the email attribute from the tbAccount relation. The attributes first name, last name, address, and phone number are going to come from the user that placed the order (registered or unregistered). These attributes are included in order to provide detail on “who” placed the order. The order type attribute is going to serve as a way to document which order was selected between a custom order or a specialty order. Since tbOrder is in a many to one relationship with Item order, all of the attributes that are associated with the relationship, superclass, and subclasses are going to be included in tbOrder as well. The attributes item name, item size, flavors, and toppings are going to come from either the tbMenu subclass or the Custom Menu subclass. These attributes are included in order to provide detail on “what” was ordered.

**tbMenu:** Creating the tbMenu relation was very simple. The name of the relation reflects the name of the entity type in the diagram. All of the attributes that were included in the ER diagram are also included in this relation except the size. The size is an attribute that the user is going to pick directly from the website. For example, if the customer selects an item from the specialty menu then we know already know all of the toppings and flavors that are included with that particular item (that information is stored in the database). However, we do not know the size in which customers would like for that item to be ordered and therefore they will select the size from the website.

**Item Order:** There is not an actual relation for Custom Menu in our database. Now normally in most databases, there will be a relation for every entity that is presented in the ER diagram. Since we are designing a web base application, customers will have the ability to select which item they would like to order on the website as well as the size of that item. This information will “live” on the website until an order is officially placed in which the item selected (custom or specialty item along with their attributes) will be transferred over to the tbOrder database.

**Custom Menu:** There is not an actual relation for Custom Menu in our database. Now normally in most databases, there will be a relation for every entity that is presented in the ER diagram. Since we are designing a web base application, we are able to use the web server in such a way to account for the “custom menu” relation. Since the Custom menu will contain items that will remain the same throughout the year, this menu can be created on the website and essentially “live” on the server. The website will serve as the middle tier between taking information from the user (in regards to the smoothie) and storing it in the tbOrder relation. Customers will be able to select the item of their choosing along with the flavor, size and toppings directly from the website and all of that information will be stored in tbOrder. This is the reason why the Custom Menu entity was described as a weak entity in the ER diagram because every specific combination of a custom item belongs to a specific order.

**Relationship database schema**

**tbAccount**

Email

Password

Fname

Address

Lname

Phone

Card Number

Expire

Card Name

Security Code

**tbOrder**

Email

Order Type

Address

Phone

Item Name

Item Size

Flavors

Order Style

Fname

Order Time

Order #

Card Name

Pay Style

Expiration Date

Security Code

Card Number

Order Price

Toppings

Lname

**tbMenu**

Item Name

Item Price

Item Description

**Primary Key, Foreign Key, and Domain Constraints**

Don’t forget this session JonJon

**Create Table Statements:**

CREATE TABLE tbAccount(

email VARCHAR(64),

pass VARCHAR(32),

fname VARCHAR(32),

lname VARCHAR(32),

address VARCHAR(64),

phone CHAR(10),

cardNum CHAR(16),

securityCode CHAR(3),

expireDate CHAR(5),

cardName VARCHAR(21),

PRIMARY KEY (email),

UNIQUE (cardNum)

)";

CREATE TABLE tbOrder(

orderNum BIGINT,

orderTime TIMESTAMP(6),

fname VARCHAR(32),

lname VARCHAR(32),

orderStyle CHAR,

email VARCHAR(64),

phone CHAR(10),

item VARCHAR(8),

itemSize VARCHAR(4),

flavors VARCHAR(8000),

toppings VARCHAR(8000),

orderPrice FLOAT,

payStyle CHAR,

cardNum CHAR(16),

PRIMARY KEY (orderNum),

)";

CREATE TABLE tbMenu(

itemName VARCHAR(64),

itemPrice FLOAT,

itemDesc VARCHAR(8000),

PRIMARY KEY (itemName)

)";

**Domain Constraints for tbAccount**

**Domain Constraints for tbOrder**

**Domain Constraints for tbMenu**

**Diagram of the Architecture of the system**

Case 1: Customer Orders a specialty Item

tbAccount

tbMenu

tbOrder

Main Menu

Specialty Menu

Order Information

**Explanation of Case 1:**

**Step 1:** Customers are going to start with the main menu of the website. From the main menu customers will be given two options when it comes to ordering a smoothie. They will have the option to build their own smoothie or to pick a specialty smoothie. For this particular case, the customer has decided to pick a specialty smoothie.

**Step 2:** Selecting the specialty smoothie option from the main menu will direct the customer to a page that will contain a table listing all of the specialty items that are available. Everything that is presented on the table will come from the tbMenu table in the database. tbMenu will contain all of the specialty item and will have to ability to be adjusted by an administrator. So essentially, all of the information for the specialty item will be pulled from the tbMenu table and presented on the website. Customers will then have the ability to select which item they would like to order.

**Step 3:** After selecting the item to order, customers will be directed to the order information page. This page is going to require the customer to fill in the following: first name, last name, email, phone number, and payment method. If the customer is a **registered user** then he/she will not have to fill in those values because they will already be prefilled. However, if the customer is not a registered user then he/she will have to fill those values in every time an order is placed online. Once all of the information is provided then the customer can place the order.

**Step 4:** Once an order is placed, all of the information that was provided on the customer and the particular item ordered will be stored in the tbOrder table in the database. tbOrder will contain the receipt information of every item ordered from the website.

Case 2: Customer Orders a Custom Item

tbAccount

Main Menu

Custom Menu

tbOrder

Order Information

**Explanation of Case 2:**

**Step 1:** Customers are going to start with the main menu of the website. From the main menu customers will be given two options when it comes to ordering a smoothie. They will have the option to build their own smoothie or to pick a specialty smoothie. For this particular case, the customer has decided to build a custom smoothie.

**Step 2:** Selecting the custom smoothie option from the main menu will direct the customer to a page that will contain multiple tables that will be used in the process of creating a smoothie. From the tables listed, customers will have the option to build a smoothie exactly how they want it. Each smoothie is broken down into the following components: flavor, size, and toppings. Customers will have the option to select the flavor, the size, and the toppings that they would like on their smoothie. Once customers have created a smoothie to their liking they can place and order.

**Step 3:** After selecting the item to order, customers will be directed to the order information page. This page is going to require the customer to fill in the following: first name, last name, email, phone number, and payment method. If the customer is a **registered user** then he/she will not have to fill in those values because they will already be prefilled. However, if the customer is not a registered user then he/she will have to fill those values in every time an order is placed online. Once all of the information is provided then the customer can place the order.

**Step 4:** Once an order is placed, all of the information that was provided on the customer and the particular item ordered will be stored in the tbOrder table in the database. tbOrder will contain the receipt information of every item ordered from the website.

Case 3: Customer creating an Account

Main Menu

tbAccount

Account

Menu

**Explanation of Case 3:**

**Step 1:** Customers are going to start with the main menu of the website. From the main menu customers will be given two options when it comes to ordering a smoothie. They will have the option to build their own smoothie or to pick a specialty smoothie. For this particular case, the customer has decided to create an account

**Step 2:** Whenever a customer is creating an account they will be directed to the “Account Menu” page. On this page, customers are required to provide the following information: email, password, first name, last name, address, and phone number. They will also have the option to include their credit card information; however, it is not mandatory. Once all of the required information has been provided the customer can create the account.

**Step 3:** Once an account is created, all of the information is going to be stored in the tbAccount table in the databse. tbAccount is going to contain all of the customers that have created an account with the website. This account will be used to speed up the ordering process whenever a customer is making an order.

**Issues to be Considered**

**Issue #1: Is the application a single-user or multi-user application?**

Since our project is being implemented on a website, it is going to be a multi-user application. Multiple users will be able to use our website at the same time.

**Issue #2: Is the application read-only (only retrieval) or read-write?**

Our application is going to be read-write. Users will be able to enter (write) certain information about themselves whenever they are making an account with the website. The information that is entered is going to be read and the stored in the database. Also certain parts of website is going to have to read information that is in the database and present them to the screen for the user to see.

**Issue #3: How is concurrency handled?**

The way our application is designed users are not going to pull any information from the database. In fact, only one relation is being updated within the database from the users and that is tbOrder. Now there is the possibility that two users can make an order online at the same time; however, that is highly unlikely. On the slightest chance that scenario does happen, the database will make the final decision on which order to store first.

**Issue #4: Is indexing or fast-retrieval an important part of your application?**

The way our application is designed fast-retrieval is not an important part for our database. Our users will not be retrieving anything from the database. The only information that the users will see from the database are the items on the special menu. However, the users do not have the ability to update the information from the tbMenu only the administrators. Every order that the user made is going to be kept in the tbOrder table of the database.

**Issue #5: What are the steps if the system or a transaction fails?**

If there transaction doesn’t go through (placing an order) then the user will have to re-order the item. If the transaction does go through and then the system fail, the user is going to receive an email notifying him/her that the process went through.

**Issue #6: Is the mobility of the application a good feature?**

Having mobile features on our application is a great idea. In fact, this a trend that is starting to become popular across multiple fast food restaurants and online services. Well-known brands such as Taco Bell and Dominoes provide the option to place an order on using a smart phone and having that food item delivered or ready to pick up.

**Issue #7: Is your application data stored on a cloud database?**

Yes, our application is going to be stored on a cloud database. We are going to use the services that Rackspace provides in order to store our database on the cloud.

**Issue #8 What is the size of the database? Are you able to populate your database with realistic data?**

Yes we are able to populate our database with realistic data. Our relation tbAccount is going to contain the email, first name, and last names of users who apply for an account on the website. Users will also be able to enter their credit card information as well which will also be stored in tbAccount. These attributes are realistic data because they contain actual properties that are used on a daily basis. Our application is also going to store the receipt of every order that was made online. The receipt is going to store “what” was ordered as well as “who” ordered it. This table is going to grow as multiple users place an order every day. The size of our database is going to depend on the amount of people of people of use our services. If we have a year where a million people ordered an item, then our database is going to have a million tuples in the tbOrder relation.

**Issue #9: Do you get proper use of available API’s or SDK’s**

For our application we did not use any available API’s or SDK’s.

**Include snapshots of the user interface**

**Section regarding 10% bonus point.**

**TALK ABOUT THE ONLINE SET UP OF THE DATABASE AND THE CLOUD SERVICES**

**Section 3: Group Details**

**Overview of Section:**

This section is going to be responsible for providing details on the individual members of the group as well the overall group performance. The list of group members and their specific responsibilities are going to be included in this section. Also this section is going to include information about every meeting that happened over the course of the semester. Towards the end of this section we are going list the major contributions for each member in the group.

**Group Details: Members and Responsibilities**

Group Members:

1.Jonathan Shields (**Team Lead**)

2. Alex Indihar

This project is going to be developed by two developers Alex Indihar and Jonathan Shields. Since this is a two member project, responsibilities are going to be split evenly between the two members.

**Responsibilities for Alex Indihar:**

-Creating the website

-Formatting the layout of the website

-Connecting the Database Online

-Interacting the database with the website

-Contributing to the semester report

-Managing the online Database

**Responsibilities for Jonathan Shields:**

-Creating the website

-Formatting the layout of the website

-Connecting the Database Online

-Interacting the database with the website

-Contributing to the semester report

-Managing the online Database

**Meeting Information:**

**Meeting #1**

January 14, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 8:00pm

**Topic of the meeting:** Picking an idea to work on for the semester Project

**Problems addressed:**

* What are is going to be the topic of our semester project?
* What is going to be the nature of our application?
* How are we going to implement a database to our project?

**Solutions proposed:**

* We decided to brainstorm a list of potential ideas that could be pursued for the semester
* Potential Project Ideas
  + An application that manages the music in a playlist (**Jonathan**)
  + An application that manages student information in a university (**Jonathan**)
  + An application that stores pictures and post from individual users similar to social media apps such as Instagram and snapchat (**Alex**)
  + An application that is able to keep track of all the statistics from a particular sports team (**Alex**)
  + An application that allows users to order an item online and keep track of all orders that were made (**Alex**)
  + An application that is tailored towards a grocery store that will keep track of the items that is in the grocery store as well as the type of item (**Jonathan**)

**What was achieved from the meeting:**

* We entered this meeting without having any clue on the direction that we wanted to take the project. We were able to leave the meeting having a list of six potential choices to choose from.
* At the next meeting we are going to narrow down the six options to one.

**Meeting #2**

January 21, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 7:00pm

**Topic of the meeting:** Picking a final idea to work on.

**Problems addressed:**

* We have to narrow down the options for the semester project from six to one
* We have to both agree on the project that was selected

**Solutions proposed:**

* We decided to work on the application that allows user to order an item online and keep track of all the orders that were made.
* Reasons why this project was pick:
  + We wanted a project that would allow us to challenge ourselves
  + We could implement this project online and attempt the extra credit of using a cloud database
  + There are a lot of other companies that are doing this that we could use as reference
* The name of our application is going to be called The Igloo (**Jonathan** thought of the name)

**What was achieved from the meeting:**

* We entered this meeting having a few options of what could be done for the semester project. We were able to leave this meeting knowing exactly what we are going to do for the semester project.
* We are going to be creating an online website called The Igloo that will allow users to order smoothies online. Users can order smoothies for pickup or delivery. We are also going to have an online database that is going to keep track each ordered that was made online as well all of the users that has created an account.
* At the next meeting we are going to research other online food services to get an idea of what is expected.

**Meeting #3**

January 25, 2017

Frank Franz Hall

Study Room 305

Duration: 8:00pm – 10:00pm

**Topic of the meeting:** Researching other companies to a get an understanding of what is considered the “norm” for an online food service.

**Problems addressed:**

* When people make an order online what is expected of the website?
* How is the website structured?
* What is the typical flow from picking an item and placing and order?

**Solutions proposed:**

* From looking at other online services such as Dominoes, Pizza Hut, and Steak-Out here are the things that we noticed
  + The center of the homepage included a variety of pictures
  + The top of the page included options to view the menu, place an order, or make an account
  + Majority of the websites had an option for carry out or delivery
  + Each website had a process that laid out the steps in detail to place an order
* After spending majority of our meeting doing research, here are a list of features that we plan on having for our application
  + An Home screen that is engaging (**Jonathan**)
  + Simple webpage layout (**Alex**)
  + A faster order to make an order for registered users (**Jonathan**)
  + Backgrounds that fit within the theme of the application (**Alex**)

**What was achieved from the meeting:**

* We entered this meeting ignorant to the basic foundations of what is expected for online food services. We are able to leave this meeting with a general sense of how to approach our website from a visual and organization standpoint.
* We are now going to start working on the basic layout of the website on paper and drawing the “look” of the application

**Meeting #4**

January 27, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 12:00pm

**Topic of the meeting:** Creating the informal description of our database

**Problems addressed:**

* The Informal description of our database is due in three days
* We need to take everything that we have been working on so far and present in an informal way

**Solutions proposed:**

* The entire meeting consisted of working together and including all of the requirements for the informal design of our documentation.
* The informal design of out presentation include the following
  + The topic of our project
  + Informal description of our project
  + Responsibilities of each member
  + Timeline for how we are going to implement each project

**What was achieved from the meeting:**

* We entered this meeting not having anything to turn in in Monday. We are able to leave this meeting with a finished version of our first draft for the informal design of our database. We are expecting multiple versions of the documentation before the final copy
* We are now going to continue designing the “look” and “flow” of the presentation on paper and discuss way to implement them at the next meeting

**Meeting #5**

February 4, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 8:00pm

**Topic of the meeting:** Creating a brief rough sketch of how the application is going to be implemented

**Problems addressed:**

* We need to create a flow of for our website
* What are users going to see when they first log on?
* How are users going to make an order on the website?
* What is the process going to be in order to place that order?

**Solutions proposed:**

* The first thing that the user is going to see when they enter the website is a slide show (**Jonathan**)
  + Most online services provide a variety of pictures on the page
  + We figured it would be neat to have a central area for one picture. But that particular picture is able to alternate between a group pictures in a slide show format
* From the home page the user will be given the following options (**Alex**)
  + A custom order can be placed
  + A specialty order can be placed
  + An account can be created
  + The user can login into the account
* We are going to have a two-step process when it comes to ordering an item(**Jonathan**)
  + The user is going to select what they want
  + The use is then going to provide the necessary information for the order to go through.

**What was achieved from the meeting:**

* We entered this meeting not having any structure for online application. We were able to leave this meeting with an clear understanding how the application is going to be executed on paper.
* Now that we have the logic of our program on paper, our next step is to start looking at ways to actually create an online application. We are going to spend our next meeting looking at all the different ways to create a website

**Meeting #6**

February 11, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 8:00pm

**Topic of the meeting:** Researching ways to create an application that is online

**Problems addressed:**

* How can we create a website?
* How can we put the logic that we have on paper online?
* What program will be used in order to edit the website and keep up with our changes.

**Solutions proposed:**

* We could use the intranet as well as the internet. (**Jonathan)**
  + The intranet is going to be used to for the development of the website.
* We are going to host the website and the database files on the cloud using the services that Rackspace provides (**Alex**)

**What was achieved from the meeting:**

* We entered this meeting with a few different approaches of how we could implement the application online. We were able to leave the meeting in agreement to using Rackspace to service our online requirements. We have decided to use the intranet for the development phase of our project and then porting it over the internet when it is done.
* For our next meeting we are going to start working on the website

**Meeting #7**

February 18, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 8:00pm

**Topic of the meeting:** Creating the structure of the online website

**Problems addressed:**

* Taking the layout that we have on paper and putting it online
* We need to create a website that includes the bare minimum in order to set up the foundation of the project

**Solutions proposed:**

* We created the home page of the website
  + The layout of the home page was created in order to set the “theme” for the entire application (**Alex**)
  + Links are also included on the home page. They currently do not transfer the user to a new page but they are there to serve as placeholders for future implementation (**Jonathan**)

**What was achieved from the meeting:**

* We entered this meeting with only the logic of website on paper. We were able to leave the meeting with the home page of our website actually completed
* Since we have made a lot of progress on the online application, our next meeting is going to be dedicated to working on the documentation

**Meeting #8**

February 25, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 8:00pm

**Topic of the meeting:** Working on the documentation for the project

**Problems addressed:**

* We need to update our documentation

**Solutions proposed:**

* The entire meeting was spent working on updating our documentation for the semester report
* A second draft was created that includes the following
  + Revise version of the informal description of the documentation
  + The informal description was updated to matched the changes made during the research and design for implementing the online applicaition

**What was achieved from the meeting:**

* We entered this meeting with an outdated version of our documentation. We were able to leave the meeting with an updated version of our documentation. Our documentation is now currently caught up to where we are in the actual design of our application.
* Since spring break is coming up, we are going to continue working on the project and communicate over skype. We are going to start working on the formal description and getting that ready for our next meeting.

**Meeting #9**

March 18, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 10:00pm

**Topic of the meeting:** Working on the formal description of our database

**Problems addressed:**

* We need to list our entity types and attributes of entities
* We also need to specify our constraints on our database
* We need to Draw the ER diagram of the database
* We need to convert the ER diagram of the database into a relational database schema

**Solutions proposed:**

* We were able to add to our documentation by including the formal description of the database
  + Every entity and attributes is included (**Jonathan**)
  + The ER diagram is created (**Jonathan**)
  + The relational database schema is mapped from the ER diagram (**Alex**)

**What was achieved from the meeting:**

* We entered this meeting not having anything to turn in formal description of our database. We were able to leave the meeting with a completed first draft of the formal description of our database.
* Similar to the informal description, we expect to go through many revisions and changes before the final documentation is turned in.
* For our next meeting we are going to continue working on the design and layout of the website

**Meeting #10**

April 1, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 12:00pm

**Topic of the meeting:** Working on the design and layout of the website

**Problems addressed:**

* We need to decorate the homepage so that it looks appealing to the user
* We need to take the previous established links and implement them to their respected pages.
* We need to implement a way for the users to have the option to make an account with the website and to login to the website.

**Solutions proposed:**

* The formatting of the home page was completed (**Jonathan**)
* The slide show feature for the home page was completed (**Jonathan**)
* Users can make an account with the website (**Alex**)
* Users can log in using their account (**Alex**)
* The formatting on the login page was completed (**Jonathan**)
* The formatting on the register page was completed (**Alex**)
* The layout for the user information page was completed (**Alex**)

**What was achieved from the meeting:**

* We entered this meeting with just the bare minimum of features that laid the foundation of the application. We are able to leave this meeting with most of the formatting done on our pages. Customers are now able to make an account as well log in to that account.
* For the next meeting we are going to continue to make progress on the application and implement the feature to actually placed an order and have that order saved in the database

**Meeting #11**

April 8, 2017

Frank Franz Hall

Study Room 305

Duration: 6:00pm – 1:00am

**Topic of the meeting:** Working on the project

**Problems addressed:**

* Work on a way to allow users to order a specialty item
* Create the layout for users ordering a custom item

**Solutions proposed:**

* Users now have a way of ordering an item from the specialty menu (**Alex**)
  + The items on the menu are being pulled from the tbMenu Relation in the database
  + Users can select the item they would like as well as the size of the cup.
  + Users can then proceed to the Order information page
* The formatting was completed for ordering a custom item (**Jonathan**)
  + Users will be able to select their item, size, flavor, and toppings for the custom item
  + Users can then proceed to the Order information page

**What was achieved from the meeting:**

* We entered this meeting not having a way for users to order a special item and not having a layout for the custom item page. We were able to leave the meeting with both of those features completed.
* For our next meeting, we plan on finalizing everything for the website and connecting everything to the cloud services that is provided by RackSpace

**Meeting #12**

April 15, 2017

Frank Franz Hall

Study Room 305

Duration: 4:00pm – 12:00pm

**Topic of the meeting:** Finishing the Project

**Problems addressed:**

* Finish the order information page
* Finish the implementation of the custom order page
* Finish the about page
* Connect the project to the cloud service
* Finish the documenation

**Solutions proposed:**

**Comments of the group members:**

**What was achieved from the meeting:**

**Meeting #10**

April 18, 2017

Frank Franz Hall

Study Room 305

Duration: 8:00pm – 10:00pm

**Topic of the meeting:** Working on the presentation of our project

**Problems addressed:**

**Solutions proposed:**

**Comments of the group members:**

**What was achieved from the meeting:**

**Major Contributions of Group Members**

**Major Contributions of Jonathan Shields**

* Created the slide show on the main page of the website
* Created the formatting on the main page of the website
* Created the formatting on the login page of the website
* Created the formatting on the register page of the website
* Created the implementation of the custom order page
* Created the name of the project
* Worked on the documentation

**Major Contributions of Alex Indihar**

* Created the implementation of having users create an account on the website
* Created the implementation of having users log in to their account on the website
* Created the implementation of taking the information that is given to the website and storing them in the database
* Created the implementation of reading the data from the tbMenu to the custom menu page on the website
* Worked on the documentation