

**CS4065 Web Infrastructure**

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Group 5

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Final Project Report Chance Saloon Dating Website

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# Introduction

This is a website for Chane online dating agency. The scope of the project was to provide the user with basic functionality to allow users to register and describe themselves, as well as browse other users and perform various searches. The Website will automatically match users with similar profiles or user can search by defining their own parameters.

Please note we have rebranded the site and called it **CHANCE DATING** replacing **FIRST CHANCE DATING**

# High Level Functionality

This website will support multiple users who are seeking a relationship.

The System will auto-match pairs of compatible profiles.

In addition a user has the facility to BROWSE/SEARCH and identify people they would like to Match with.

The system will facilitate the communications between these two users once both users **like** each other.

The system will also support an administrator role whose function is to act as a mediator between users and will have the power to block or bar users.

The system will monitor communications between users and automatically block messages that include inappropriate content.

Users will register their email address along with some personal details when setting up a new account. Once this is complete they will have access to do the following:

* Receive recommendations for people who match their profile
* Complete searches/browse of the database to find people
* Chat with other users
* Maintain account by updating profile, contact details or password
* Report inappropriate behaviour

For our website design we have chosen to take a minimalist approach in the number of questions being asked of the user. Based on our research we have concluded that physical attractiveness plays a major part in initial encounters (Swami & Furnham, 2008). The website will be limited geographically to Ireland

# Information

**Please use GOOGLE CHROME or FIREFIX**

**Links to Pages**

|  |  |
| --- | --- |
| Dating Pages | Page Link |
| Index.php | <http://hive.csis.ul.ie/4065/group05/index.php> |
| Logon.php | http://hive.csis.ul.ie/4065/group05/Logon.php |

**Useful Passwords**

|  |  |  |
| --- | --- | --- |
| USER | EMAIL | PASSWORD |
| SysAdmin | [16230256@Studentmail.ul.ie](mailto:16230256@Studentmail.ul.ie) | welcomE01# |
| SysAdmin | 16230124@studentmail.ul.ie | welcomE01# |
| SysAdmin | 0510661@stedentmail.ul.ie | welcomE01# |
| SysAdmin | 0199124@studentmail.ul.ie | welcomE01# |

# Team Contribution

|  |  |  |
| --- | --- | --- |
| Name | EMAIL | Contribution |
| Deirdre Shanahan | [16230256@Studentmail.ul.ie](mailto:16230256@Studentmail.ul.ie) | 25% |
| Adrian O Sullivan | 16230124@studentmail.ul.ie | 25% |
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# Key Functionality

|  |  |  |
| --- | --- | --- |
| Function # | Screen | Description |
| FN1 | HOME | Provide the user with home page which Displays the Option to Either **Logon** or **Register** |
| FN2 | Register | User can select Register from Logon Screen and will be navigated to Screen to enter **Email** and **Password** |
| FN3 | Reset Password | If User cannot remember password they have the option to select **reset password** from Logon Screen  which will navigate them to screen to enter email and new password will be sent to email |
| FN4 | Meeting Space | When User is successful in Logging on they will be navigated to Meeting Space which is the HUB of the Dating Site and will display 5 features |
| **Heading Navigate Bar at the top** will display Name of the User and Allow them the option : **Edit Profile**, **Remove their Profile from the Site, Help and Logout of the Site** **Match Finder** - this is a spontaneous **SEARCH/BROWSE** function which allows the user look for matches under different criteria than stored in their Profile. Facilitating the user if they are in a different location or indeed if they are looking for a different profile at that moment. This search criteria is not stored in the Database  Also please note **HELP** function to explain how to work app |
| **You are Chatting With Option Box** - Provide details of chats you are having |
| **Possible Matches** Photos allowing the user the option to Like/Maybe/Goodbye/Report. Please note we are providing the user the option of people who match regardless of Gender Preference |
| **People Who Like Me -** Displaying details of people who like my profile and may be interested in me |
| **People Who I Like** Details of all the people I have liked and that I may find a match |
| FN4.100 | Meeting Space/Edit Profile | **Edit Profile** allows user to create a new profile or edit exiting profile. User is asked to enter **First Name** , **Surname**, **DOB**, **Nearest City/Town**, **Gender** (allowing drop down option Male, Female, Transgender M-F or F-M ), **Preferred Gender** (same validation per Gender) **Seeking Min Age Profile** (using slide bar ), **Seeking Max Age Profile**(using slide bar), **Distance User will travel** (Using Distance bar) **Relationship type** (Love, Casual, Friendship, Relationship - Radio Buttons). Validation limited due to drop down screens and radio buttons. Mix /Max Age is validated. Press **Next** to take user to Second Profile details screen (Personal Details Page2 **FN4.101**) or **Cancel** which brings user back to **Meeting Space** |
| FN4.101 | Meeting Space/Edit Profile 2 | **Edit Second Profile Page(Personal Details Page 2)** Allows the user to load their Photograph, update some additional information in BIO box and select through radio buttons Hobbies which are - Music, Sport, Travelling, Sailing, Food, Work, Family, Cooking, Gym . (User is not obliged to select a hobby/Interest) **SAVE Please note Photo is not saved on profile until save button is pressed.** User can validate this by viewing Profile after update |
| FN4.102 | Meeting Space/Remove Account | **Remove Account** will navigate the user to screen which clearly calls out the implications of removing account - everything will be removed . User is asked to Press **Remove Account** if they want to continue to **Cancel** (abort remove). If user selects Remove then account is removed and user is brought back to logon screen. |
| FN4.103 | Meeting Space/Logoff | **Logout** - Navigates user to Log Out Screen providing the user with option **Logoff** or **Cancel. Logoff** will bring user to screen to confirm they really want to logout which bring user back to logon screen**. Cancel** will bring user to **Meeting Space** |
| FN4.104 | Meeting Space/Match Finder (SEARCH/BROWSE FUNCTIONALITY) | This is a spontaneous option for the user to decide if they want to change some of their profile information to get meet a partner. The user is presented with screen Gender Preference, Preferred location, Relationship type, Interests, Seeking Age. All these use the drop down screen which limits the user to the Mandatory Choices. System only allowing for 1 selection |
| FN4.105 | Meeting Space/Possible Matches | Will display list of people who may be a match for me User needs to click on the photos that they want to do an action. **Please note that the system also suggest people of all Gender for your view** |
| FN4.106 | Meeting Space /Possible Matches Like Option | User can select photo of possible Match and Select the Like Button. This will remove the Photo of this person from **Possible Matches** to **People I have liked View** |
| FN4.107 | Meeting Space/Possible Matches View Option | User can select photo of possible Match and Select the View Button, this will navigate the user to the next screen to see details of the Person who is a possible Match for me |
| FN4.108 | Meeting Space/Possible Matches Maybe Option | User can select photo of possible Match and Select the Maybe Button. This will display a question mark under the possible Match photo for future reference. Please note this person's photo needs to remain on possible matches box |
| FN4.109 | Meeting Space/Possible Matches Goodbye Option | User can select photo of possible Match and Select the Goodbye Button. This will remove the person from possible Matches and will not be displayed again |
| FN4.110 | Meeting Space/Possible Matches Report Option | If the User Notices Something offensive on another user profile they have the option to Report this person the **Sysadmin** team. Selecting Report will flag the Profile of that person for the SYSADMIN team to check |
| FN4.111 | Meeting Space/People Who Like Me | This section of the Meeting Space will provide me with Details of possible matches who **liked** my profile |
| FN4.112 | Meeting Space/People Who Like Me/like | User can select photo of person who liked their Profile . Select the **Like** Button. If both users have liked each other this will automatically initiate the option to **chat** screen This supports the concept of mutual consent |
| FN4.113 | Chat Line | This screen is initiated from the meeting space screen. User can send message to proposed match and start conversations and vise versa. Chat begins - the system will automatically check conversation and identifies the use of black listed words . If more than 5 messages containing black listed words are detected then the account is automatically suspended for 7 days. It also takes the liberty of blocking the visibility of the black listed words to the other user |
| FN5.0 | Administrator Options | This option allows the Admin to manage the site.  User has to log on with Specific Logon and Password (Details outlined in Useful Password Section ) Once user successful logs in they will be presented with Admin screen and photos of users who have been **reported**  by other users or who have been automatically reporting due to the use of bad language. It will also display the person who reported them  **Suspended** Details on who has been suspended  **Barred** Details on who has been Barred |
| FN5.101 | Administrator Options – Reported - View | Click Photo to view why this person was reported and you will be displayed the persons profile. Sysadmin can make a decision on next steps based on profile. If no actions Click on **Sysadmin logon** to return to home page |
| FN5.102 | Administrator Options -Suspend 1 Month | Click Photo to view why this person was reported. If there is evidence of an offence the Sysadmin can suspend the user for 1 month. Please select **Suspend to suspend** |
| FN5.103 | Administrator Options - BAR | Removes the option for the person to join out app ever again |
| FN5.103 | Administrator Options - Search | Search for other Users through people / match finder |
| FN5.105 | Administrator Options - Logout Option | Same functionality as FNS3.103 |
| FN5.106 | Administrator Options - Menu | At all time when the Admin is in navigating through menu’s they can click on their name on the **Bar** line and this will take back to home screen |
| FN5.107 | Administrator - Options - Revoke | Admin has the option to revoke a **suspension** or a **BAR** by simply clicking on these options on the home screen |
| FN5.108 | Black list of words, Interests(Hobbies) and Status Master | can only be maintained using SQL statements by the DBA |

# SPECIALS/Additional Functionality Added after Design Document Submitted

Geo Location Matching – we calculate the distance between users using Latitude and Longitude coordinates and return matches for people within their specified travel distance range

Chat Facility – Includes moderation of black listed words and build in facility for suspending accounts for repeat offenders

Chat Facility - Support the concept of Mutual Consent. If both users do not like each other then they cannot initiate conversations

SQL Injection Prevention - All database queries where users provide input are processed using parameterized queries

PHP Injection Prevention – All Form submission completed using HTML special characters

Session Management – Each logon is assigned an encrypted session hash which is stored on the user profile in the database. This session hash is checked on each page to ensure user account is not been spoofed

Syst Admin - In addition to agreed scope to support an administrator role described above. We have introduced the functionality to allow the SysAdmin to revoke a suspension or revoke a BAR of a user.

The website is responsive allowing the user to use the app on mobile or other screen of different sizes.

# Out of Scope: -

Email Functionality – As agreed with Aidan and Connor the app will provide the user the option to reset their password and enter email address to send password. The email functionality is not in scope for this app.

# Database

The following changes has occurred in the database tables from the initial design:

* user\_profile --> 2 new records added
  + suspended\_until\_date datetime added
  + session\_hash varchar(250) added
* user\_communication --> one record removed
  + Status\_date removed
* status (table name changed from status to status\_master)

The changes are highlighted below.

Also new view created:

1. matches\_view

Also cursor created:

1. Cursor to get all un-processed engine usage entries for period

## Database Tables

## user\_profile

Table 1 user\_profile, This table describes each user. The primary key is id, each user has email as unique identifier, with user\_status\_id as foreign key which links a central status table. The password\_has is secured using sha2 encryption with a 256 length key.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Primary** | **Foreign** |
| id | int | Yes |  |
| password\_hash | Varchar(200) |  |  |
| first\_name | Varchar(50) |  |  |
| surname | Varchar(100) |  |  |
| email | Varchar(100) | (unique) |  |
| date\_of\_birth | date |  |  |
| gender\_id | int |  | Yes |
| gender\_preference\_id | int |  | Yes |
| From\_age | int |  |  |
| To\_age | int |  |  |
| City\_id | int |  | Yes |
| Travel\_distance | int |  |  |
| Relationship\_type\_id | Int |  | Yes |
| picture | blob |  |  |
| my\_bio | Varchar(1000) |  |  |
| Black\_listed\_user | Tiny int |  |  |
| Black\_listed\_reason | Varchar(100) |  |  |
| Black\_listed\_date | date |  |  |
| User\_status\_id | int |  | yes |
| is\_administrator | boolean |  |  |
| suspended\_until\_date | datetime |  |  |
| session\_hash | varchar(250) |  |  |

## match\_table

Table 2 match\_table, This table lists the matches for a user, Primary Key for each match is id, with foreign keys( match\_user\_id\_1, match\_user\_id\_2, match\_status\_id) linking users and foreign key - communication\_id identifying if there is an initial communication between matches.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Primary** | **Foreign Key** |
| id | int | yes |  |
| match\_user\_id\_1 | int | (composite unique) | yes |
| match\_user\_id\_2 | int | (composite unique) | yes |
| match\_date | datetime |  |  |
| response\_date | datetime |  |  |
| user\_id\_1\_interest\_level | int |  |  |
| user\_id\_2\_interest\_level | int |  |  |
| communication\_id | int |  | yes |
| User\_1\_match\_status\_id | Int |  | yes |
| User\_1\_match\_status\_date | Datetime |  |  |
| User\_2\_match\_status\_id | int |  | yes |
| User\_1\_match\_status\_date | Datetime |  |  |
| system\_generated\_match | boolean |  |  |

## user\_communication

Table 3 user\_communication, This table is the communications table between user, Primary Key for each communication is id, with foreign keys( from\_user\_id, to\_user\_id status\_id) linking users and foreign key - black\_listed\_word\_id identifying inappropriate communications made by users. Black listed communications will be blocked and if a predefined quota is reached by a user then their account will be suspended. When a reply to a communication is recorded, a link is established to the previous communication in order to allow the conversation thread to be maintained.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Primary** | **foreign** |
| id | int | Yes |  |
| from\_user\_id | int |  | yes |
| communication\_datetime | datetime |  |  |
| message | Varchar(140) |  |  |
| status\_id | int |  | yes |
| to\_user\_id | int |  | yes |
| replying\_to\_communication\_id | int |  | yes |
| black\_listed | boolean |  |  |
| Black\_listed\_date | datetime |  |  |
| Black\_listed\_word\_id | int |  | yes |

## black\_list\_word

Table 4 black\_list\_words, This Table contains a list of black listed words, it is used to check if the user uses inappropriate language and block any communication where one of the words are identified. Primary Key is id which is unique to each black listed word. If a user reaches a predefined quota of inappropriate communications then their account will be suspended. In order to prevent offence to people who have access to the database table, we have encrypted the word using md5 encryption, while this is no longer considered the securest form of encryption, it serves a purpose in this instance.

|  |  |  |
| --- | --- | --- |
| **Field** | **Type** | **Primary** |
| id | int | yes |
| word | Varchar(100) | unique |

## user\_interests

Table 5 user\_interests, This table contains the lists of interests a user has. Primary key is user\_interest\_id.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Primary** | **Foreign** |
| Id | Int | yes |  |
| Interest\_id | Int | Unique (composite) | Yes |
| User\_id | Int | Unique (composite) | Yes |

## interests

Table 6 interests, This Table contains a master list of interests a user may have, it is used by the match table and user interests table. Primary Key is interest\_id which is unique to each interest

|  |  |  |
| --- | --- | --- |
| **Field** | **Type** | **Primary** |
| Interest\_id | int | yes |
| description | Varchar(200) |  |

## Gender

Table 7 Gender Table, This is used by the user Profile table to identify the gender and gender preference of the User. Primary Key - id ,is an identifier for a gender type.

|  |  |  |
| --- | --- | --- |
| **Field** | **Type** | **Primary** |
| id | int | yes |
| Gender\_name | Varchar(200) |  |

## city

Table 8, The city Table, is unique to each user and identifies the location and location preference of match, Primary key is User\_id. Geo-coordinates are recorded for each city so that distance between user locations can be calculated.

|  |  |  |
| --- | --- | --- |
| **Field** | **Type** | **Primary** |
| id | int | yes |
| City | Varchar(100) | unique |
| county | Varchar(100) |  |
| geo\_x | float |  |
| geo\_y | float |  |

## relationship\_type

Table 9 Relationship Type, is used by the user Profile table to identify the relationship type the user seeks. Primary Key - id, is an identifier for a relationship type.

|  |  |  |
| --- | --- | --- |
| **Field** | **Type** | **Primary** |
| id | int | yes |
| Relationship\_type | Varchar(200) | unique |

## Status\_master

Table 10 Status\_master Table, Primary Key - id, is an identifier for user status. The status table stores status for the user profile, match table and user communications. These are separated using a Boolean indicating which status relates to which table.

|  |  |  |
| --- | --- | --- |
| **Field** | **Type** | **Primary** |
| id | int | yes |
| Status\_description | Varchar(100) |  |
| is\_user\_status | boolean |  |
| is\_match\_table\_status | boolean |  |
| is\_user\_communication\_status | boolean |  |

# Stored Procedures

## generate\_matches

This stored procedure can be called with a from and to user profile id to support processing either a single user profile or a range of profiles. When executed it carries out the following steps:

* Get a list of new or active user profiles and for each one do the following
  + Identify a list of matches based on their preferences who are within the target distance of their city
  + Exclude profiles that they have already been matched against
  + Insert any new matches into the match table, these will be flagged as auto generated.

When both users log onto the system they will be able to browse their list of matches and the auto generated matches will be listed. Each user can status a match with options such as Like, Maybe or Goodbye. If status of Goodbye is selected then this match will never be presented to the user again.

# Entity_relationship_diagram.png

# Sources

Photos taken from <https://www.pexels.com/>

All Icons are sourced from Open Source Project