

Business Requirement Documents

CECS 491

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1. PROJECT SUMMARY

1.1 Purpose

The purpose of this document is to provide information about the business requirements used in the **Kraken Bracket** project

1.2 Background Information

- When it comes to managing large-scale video game tournaments, it is likely that there will be confusion among staff and competitors
- Other video game tournament apps on the market do not provide real-time updates once the information is inputted into the system. This will cause delays and inconveniences for those who are keeping track of updates regarding tournament matches, competitors, etc.
- The **Kraken Bracket** project will provide solutions to these problems. The most important aspect of the project is to provide all users with real-time information on events, tournaments, and other aspects of the app.

2. PROJECT OBJECTIVE

We are projecting that this application can potentially be a major platform for a competitive gaming audience. This application is targeted to suit the needs of tournament organization for tournament hosts, competitors, and spectators of tournaments large or small. With the potential traction this product gains, it can also become a social platform similar to Twitch and Discord such that product is also a platform to reach the gaming audience in terms of product advertisement potential sponsors as well.

3. PROJECT SCOPE

3.1 Audience

Our application is targeting specifically competitive video game players who seek a solution to organize tournament brackets whether the tournament is large or small, as well as regular users who are interested in knowing tournament information. We intend our application to be the go-to application for all tournaments.

The application will initially be used launched for audiences in California. After launch, the application will be accessed by users within the continental United States plus Alaska and Hawaii.

3.2 Type Of Application

Initially, the application will support the latest versions of Google Chrome and Mozilla Firefox browsers for the web application. Minimum 10 mbps internet connection

The intended target is to have the application supported on the latest versions of iOS and Android. It will support 4G cellular connection and above.

3.3 Data To Be Collected

The following tentative data will be collected:

- User account information
 - Name (first and last)
 - Birthday (MM/DD/YYYY)
 - Location (city and state)
- Tournament Brackets and Events
 - Name
 - Comments
 - Date / time (local time of the event)

4. FEATURES

This section outlines functional and non-functional features for all users. Each feature varies depending on the user role.

4.1 Account

4.1.1 Account Registration

- User create an account to access features exclusive to registered users
- Required Account information to be inputted
 - Email
 - Email format
 - Maximum of 200 characters
 - Password
 - Minimum of 12 to a maximum of 2000 characters
 - At least one of the following characters:
 - Upper or Lowercase alphabet letter
 - Number (0-9)
 - Special character (UTF-8)
 - First Name, Last Name
 - Minimum of 2 to a Maximum of 20 characters (letters only) for each of the names
 - GamerTag
 - GamerTag minimum of 2 to a maximum of 20 characters, can be non-unique (utf-8)
 - Every GamerTag will have 4 ending digits 0000-9999
 - Security Question
 - Select 3 questions from a preset of 15
 - Minimum of 2 to a maximum of 20 characters response for each question
- Fill out Profile Information or skip for a later time
 - DOB (MM/DD/YYYY)
 - Phone number (###-###-####)
 - Location (city and state)
 - Initially California
 - Add profile picture (500 x 500 pixel)

Preconditions

- Must not be logged in with another account
- Must be at Account Registration view

Postconditions

- User account is created
- Display user-friendly message indicating account is created
- Redirected to the homepage
- Account creation selection is removed and replaced with GamerTag

Failure Postconditions

- Unable to create account
- Unable to be redirected to homepage
- Log in / Account creation selection is still visible and not replaced

Non-functional

- Account will be created and stored within 1000 ms
- User is automatically login after creation

4.1.2 Account Management

- Allow user to manage their account, such as edit / update account information
 - Change password
 - Change security questions and answers

Preconditions

- User must be registered and logged in
- Must be in Account Management view
- User must input a time-sensitive code in order to change the password
 - Code is sent to User's email, after the user requests to change the password
 - Code is a random 8 character combination of letters and numbers
- Security questions must be answered correctly in order to change security question

Postconditions

- User account is updated
- Display user-friendly message indicating what was updated

Failure Postconditions

- Unable to update Account due to one or more of the following conditions:
 - Invalid password
 - Invalid password change code
 - Answer to the security question is invalid

Non-functional

- Account will be updated and stored within 1000 ms
- Password change code is sent to the user's email within 5000 ms
- Password needs to meet the minimum requirements
 - Minimum of 12 to a maximum of 2000 characters
 - At least one of the following characters:
 - Upper and lowercase
 - Number (0-9)
 - Special character (UTF-8)

4.1.3 Account Recovery

- User forgot their password and is unable to login and requests to reset their password
- Answer security questions to received

Preconditions

- User is not currently log in
- Must be at log in view
- Must have access to Email

Postconditions

- Security question answered, 8 character combination code is sent to email
- User is redirected to password reset view and prompt to enter a new password

Failure Postconditions

- Password is not successfully updated
- Unable to log in with new password

Non-Functional

- Security code is sent to user's email within 5000 ms
- Password is updated within 1000 ms

4.2 User (Registered and Non-Registered)

4.2.1 Search For Tournament Brackets

- Search for Tournament Bracket
- Search criteria
 - Keyword Bracket name
 - Must have a minimum of 1 character keyword

Preconditions

- User does not need to be logged in to search
- Must be at search view

Postconditions

- Displaying results
 - 10 results per view
 - 10+ results will be displayed in multiple of 10
 - Can be less than 10
- Result displaying
 - Tournament Bracket name
 - Host name
 - Type of game being played
 - Type of bracket system
 - Number of Competitors
 - The event that is it associated with (if any)

Failure Postconditions

- Result is not displaying properly

Non-functional

- Result is fetched and displayed within 1000 ms
- Sort is accurate
 - Most keyword match to least

4.2.2 Search For Event

- Search for Event

- Search criteria
 - Keyword event name
 - Must have a minimum of 1 character keyword

Preconditions

- User does not need to be logged in to search
- Must be at search view

Postconditions

- Displaying results
 - 10 results per view
 - 10+ results will be displayed in multiple of 10
 - Can be less than 10
- Result displaying
 - Event name
 - Host name
 - List of Tournament Bracket it encompasses
 - First three

Failure Postconditions

- Result is not displaying properly

Non-functional

- Result is fetched and displayed within 1000 ms
- Sort is accurate
 - Most keyword match to least

4.2.3 Search For Registered User

- Search for User
- Search criteria
 - Keyword - Gamertag
 - Must have a minimum of 1 character keyword

Preconditions

- User does not need to be logged in to search
- Must be at search view

Postconditions

- Displaying results
 - 25 results per view
 - 25+ results will be displayed in multiple of 25
 - Can be less than 25
- Result displaying
 - Gamertag
 - Gamertag ending 4 digits

Failure Postconditions

- Result is not displaying properly

Non-functional

- Result is fetched and displayed within 1000 ms
- Sort is accurate
 - Most keyword match to least

4.3 Registered User**4.3.1 Comment On Tournament Brackets**

- Allow user to leave a comment on Tournament Bracket
- Reply to another comment within the Tournament Bracket
- Minimum 1 character comment
 - Any character that is UTF-8 support

Preconditions

- User must be logged in
- Must be at Tournament Bracket view
 - Under comment selection

Postconditions

- Comment is successfully uploaded
- User Gamertag is display along with the time stamp

Failure Postconditions

- Comment upload is not successful
- Wrong Gamertag

- Local timestamp is wrong

Non-Functional

- Comment is uploaded within 1000 ms
- Comment is uploaded to the proper place where the user intended to comment

4.3.2 Message Other Registered-Users

- Sent / Receive message to / from another User
- Must have a minimum of 1 character keyword

Preconditions

- User must be logged in
- The other user must registered within our system
- User must be at message view

Postconditions

- Message is sent / received by user
- User is notified when a message is received

Failure Postconditions

- Message is sent / received by the wrong user
- Message incorrect
- Timestamp is incorrect

Non-functional

- Message is sent / received within 1000 ms
- User is notified within 500ms when the message is received
- Message is displayed within the message view correctly

4.3.3 Following Event / Tournament Bracket / Registered User

- User select follow
 - Event
 - Tournament Bracket
 - Registered User

Preconditions

- User must be logged in

- Must be under Event, Tournament Bracket or User view

Postconditions

- User is successfully following
- The following is saved to a follow list

Failure Postconditions

- The following does not appear in the following list

Non-Functional

- Following will be register within 1000 ms

4.3.4 Create Tournament Bracket

- User create Tournament Bracket
 - Bracket Name Minimum 5 to a maximum of 75 characters (utf-8)
 - Can not contain emojis
 - Bracket Type (Single, Double, Round-Robin)
 - Maximum number of competitors Maximum 128 users
- Additional optional information to include
 - Video game being played, Maximum of 50 characters
 - Gaming platform, Maximum of 50 characters
 - Rulesets, Maximum of 700 characters
 - Start Date, End Date (MM/DD/YYYY)
 - Start date by default is when Creation is done
 - End date by default is when a winner is decided

Preconditions

- User must be logged in
- User must be at Tournament Bracket Creation View

Postconditions

- The Tournament Bracket is created and able to be viewed
- Bracket has the correct information
- Registered Users is able to register to the Bracket

Failure Postconditions

- Incorrect Host user, allowing another User to edit

- Bracket is unviewable
- Users can not register to the Bracket

Non-Functional

- Bracket will be created and viewable within 1000 ms
- View will be automatically zoom out to view and is able to be zoomed in

4.3.5 Create Event

- User creates an event and becomes host for the event
 - Event name minimum 5 to a maximum of 75 characters (utf-8)
 - Can not contain emojis
 - User can create multiple tournament brackets within an event minimum 1 to a maximum of 10 tournament brackets
 - Valid location address
 - Start Date, End Date (MM/DD/YYYY)
- Optional information
 - Event descriptions
 - Minimum 5 to a maximum of 700 characters
 - Can include emojis and special characters (utf-8)
 - Create Tournament Bracket now or later
 - Registration end date
 - Default Event end date

Preconditions

- User must be logged in
- User must be at Event Creation view

Postconditions

- The event is created
- The user who created the event becomes the host of the event
- The Tournament Brackets are created within the event
- Registered users are able to sign up for the event and the Tournament Brackets they want to participate in

Failure Postconditions

- Incorrect Host user, allowing another User to edit the event information
- Event is unviewable

- Brackets in the event are unviewable
- User cannot register for the event or tournament brackets within the event

Non-functional

- Event will be created within 1000 ms

4.3.6 Register For Tournament Brackets And Events

- User select register to Tournament Bracket or Event
- Confirm registration

Preconditions

- Users must be logged in to register for events and Tournament Brackets
- Must be under Event or Tournament Bracket view

Postconditions

- User is successful in registering for Event and/or Tournament Brackets
- Automatically follow the Event and/or Tournament Bracket

Failure Postconditions

- User is unsuccessful when registering for an Event or Tournament Bracket
- Automatic following failed, User does not receiving notification

Non-Functional

- Registering process will be completed within 1000 ms

4.3.7 Unregister Tournament Bracket And Event

- User select unregister Event and/or Tournament Bracket
- User does not want to receive notification
- Unregister before Event end date
 - User will be indicted that unregistration was a success
- Unregister after Event end date
 - This action can not be done
 - User will always have an association with this Event
- Unregister before Tournament Bracket start date
 - Competitor label is removed
 - User will be indicted that unregistration was a success
- Unregister after Tournament Bracket start date

- This action can not be done
- User will always have an association with this Tournament bracket
- This is also considered a lose for the user

Preconditions

- Users must be logged in
- Must be at Event and/or Tournament Bracket
- Users must be already registered in a Event and/or Tournament Bracket
- Users can unregister before the Event and/or Tournament Bracket starts

Postconditions

- User is successful in unregistering from an Event and/or Tournament Bracket
- Automatically unfollow to stop notification
- For Tournament Bracket, User label “Competitor” is removed

Failure Postconditions

- User is unsuccessful in unregistering from an Event and/or Tournament Bracket
- User still gets notification from an Event and/or Tournament Bracket even after unregistering
- User is still registered in Tournament Bracket and received a lost

Non-functional

- Unregistering process will be completed within 1000 ms
- Tournament Bracket will automatically be updated

4.3.8 Profile Customization

- User can edit certain aspects of their profile:
 - GamerTag
 - First and Last name
 - Date of birth
 - Profile picture
 - Upload own profile picture
 - User can upload JPEG files it will have to be cropped
 - 500 x 500 pixel limit
 - Select 1 of 10 available preset avatars
 - Bio minimum 1 to a maximum of 700 characters (utf-8)

Preconditions

- User must be logged in
- Must be at profile view
- GamerTag limit not reached

Postcondition

- User is successful in making any changes in their profile
- User will automatically receive an Email indicating change has occurred

Failure Postcondition

- User is unsuccessful in saving any changes they have made in their profile
- Updated information is not being reflected on the profile

Non-functional

- Information will be updated within 1000 ms

4.3.9 Manage Follow List

- User view Follow List
 - Select to unfollow
 - Select stop receiving notification
- User can sort through Follow List by
 - GamerTag
 - Tournament Bracket
 - Event

Preconditions

- User must be logged in order to manage their follow list
- User must be at follow view
- User must already be following some Events, Tournament Brackets, and/or other users

Postcondition

- User is able to sort their follow list based on the filter they have enabled
- Displaying follow list
 - 25 results per view
 - 25+ results will be displayed in multiple of 25
 - Can be less than 25
- Follow list will display

- GamerTag
- Event
- Tournament Bracket

Failure Postconditions

- User is not able to sort their follow list based on the filters that they have enabled

Non-functional

- Follow list will be sorted within 1000 ms
- Sort is accurate
 - Ascending descending order by name, follow count.

4.4 Host / Co-Host

4.4.1 Update Event Information

- Change required Event information
 - Start and end time
 - Location
 - Public or private
- Change optional Event information
 - Event descriptions
 - Minimum 5 to a maximum of 700 characters
 - Can include emojis and special characters (utf-8)

Preconditions

- User must be logged in and be a Host of the Event
- Must be at Event view

Postcondition

- Host is able to save any changes made to an event
 - This includes any changes made to Tournament Brackets that is in an event
- Users following the Event will be notified

Failure Postconditions

- Host is unsuccessful in saving changes made to an event

Non-Functional

- Changes will be updated within 1000 ms

4.4.2 Update Tournament Bracket Information

- Change required Tournament Bracket information
 - Type of bracket system (Single, Double, Round-Robin)
 - Maximum number of competitors (maximum of 128 Users)
 - Input registration end date (MM/DD/YYYY)
 - Registration end date has to be after current creation date
- Change optional Tournament Bracket information
 - The associated Event if there is any
 - Video game being played
 - Rule-set the game is being played on
 - The platform the game is being played on
 - Start / End date (MM/DD/YYYY)

Preconditions

- User must be logged in and be the Host of the Tournament Bracket or Event that the Tournament Bracket is under
- Must be at Tournament Bracket view

Postconditions

- Host is successful in saving any changes made in the tournament bracket
- Users following the Tournament Bracket will be notified

Failure Postconditions

- Host is unsuccessful in saving any changes made in the Tournament Bracket
- The new Start / End date is conflicting with the old Start / End date

Non-Functional

- Changes will be updated within 1000 ms

4.4.3 Manage Tournament Bracket

- Input Competitor score
- Adding / removing / replacing a Competitor
- Disqualify Competitors (must provide reason(s))
- Input grace period for upcoming matches (minutes)

Preconditions

- User must be logged in and be a Host / Co-Host that is authorized to manage the Tournament Bracket
- Must be at Tournament Bracket View

Postconditions

- Tournament Bracket successfully updates when a Host / Co-Host manages certain information in the tournament bracket
- Users following the Tournament Bracket will be notified

Failure Postconditions

- Tournament fails to update even after host or co-host manages any information in the tournament bracket
- Update is not being reflected on Tournament Bracket

Non-Functional

- Changes will be updated within 1000 ms

4.4.4 Delete Tournament Bracket and Event

- Host want to remove Tournament Bracket and Event
- Before Event start date
 - Host can also remove Tournament Bracket at this point
 - Deletion will be notified to all users currently following and registered to the Event and Tournament Bracket
- Event can be deleted before Event end date
 - Any encompassing Tournament Bracket will lose its association
 - Deletion will be notified to all users currently following and registered to the Event
- After Event end date
 - This action can not be done
 - Event is archived
- Tournament Bracket can be removed before Tournament Bracket start date
 - Deletion will be notified to all users currently following and registered to the Tournament Bracket

Preconditions

- User must be logged in

- User must be the Host for the Event and/or Tournament Bracket if they want to delete it
- Host must delete the Event and/or Tournament Bracket before the Start Date

Postconditions

- Host is successful in deleting the Event and/or Tournament Bracket
- Users following the Event and/or Tournament Bracket will be notified

Failure Postconditions

- Host is unsuccessful when trying to delete the Event and/or Tournament Bracket
- The Event and/or Tournament Bracket is still accessible by Users

Non-functional

- Deletion will be completed within 1000 ms
- All Users currently in view will be redirected to a different page

4.4.5 Assign Other Registered Users To Be A Co-Host

- Select user and make them a Co-Host
- Indicate what power / access Co-Host has

Preconditions

- User must be logged in
- Must be at Event and/or Tournament Bracket View
- GamerTag of the other User
 - Manual input or select from Follow list
- User must be the Host who created the Event and/or Tournament Bracket to assign other Users to be a Co-Host

Postcondition

- User assigned by Host, now currently has Co-Host attribute for the Event and/or Tournament Bracket
- User will receive notification of being upgraded to Co-Host

Failure Postconditions

- New Co-Host is unable to exercise their power given
- New Co-Host is able to exercise power that is not given to them

Non-Functional

- User assignment will be completed within 1000 ms
- Follow list can be sorted for faster search

4.5 Competitor

4.5.1 Check Into A Match

- Check into a Tournament Bracket Match before the check-in time during the grace period
- Competitor will self check in by inputting a 5 character code supplied by Host/Co-Host that will contain numbers, lowercase letters, and uppercase letters from the english alphabet
- Competitor inputs 5 character code to check in
- Have an indicator shown at the Tournament Bracket that a Competitor has checked-in

Preconditions

- User must be logged in
- User must be a competitor of the Tournament Bracket
- Competitor can only check in during the grace period of the tournament bracket

Postconditions

- Competitor who checks in during the grace period is successfully marked as checked in the tournament bracket
- Competitor who does not check in during the grace period becomes disqualified in the tournament bracket they are suppose to attend

Failure Postconditions

- Competitor who are checked into a match is unsuccessful in checking in a match and becomes disqualified from the tournament bracket they are competing in
- Competitors who do not check into the tournament they are competing after the grace period is still successfully marked as checked in

Non-Functional

- User check-in status will be updated within 1000 ms

4.5.2 Have A Substitute

- Have a backup Competitor in case the original Competitor cannot compete
 - Selected by the original Competitor
 - Must be approved by Host / Co-Host

Preconditions

- User must be logged in
- User must be a competitor of the Tournament Bracket
- Substitute User must be registered User
- If the tournament bracket is being held under an event, substitute must also be registered in the event the tournament bracket is being held at to be qualified as a substitute competitor

Postcondition

- User successfully becomes a substitute for a competitor
- Substitute competitor should be able to check in a Tournament Bracket now during the grace period

Failure Postconditions

- A competitor is unsuccessful in assigning a substitute competitor
- A substitute competitor is unable to check in when competing in a Tournament Bracket

Non-Functional

- Substitute competitor will be added within 1000 ms