**Use Case Descriptions**

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| Use Case ID: | UC01 | | |
| Use Case Name: | Login | | |
| Created by: | Hazel | Last Updated by: | Hazel |
| Date created: | 29 Jan 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor | User |
| Description | Users can log into an account on the website application with a unique username and password. |
| Preconditions | 1. Device must be connected to Wi-Fi or Mobile Data |
| Postconditions | 1. Users will be able to login with their email address and password. 2. Users will be able to take the RIASEC test and logout |
| Priority | High |
| Frequency of Use | Medium |
| Flow of events | 1. System requests input for email and password 2. User enters email address and password 3. User clicks “Log In” button 4. Information is validated against database 5. User logs in successfully |
| Alternative flow: | **AF-S1: Email Address is invalid**   1. User is presented with an error message 2. User is prompted to enter their username again 3. Return to step 1   **AF-S2: Password is incorrect**   1. User is presented with an error message 2. User is prompted to enter their password again 3. Return to step 2 |
| Exceptions: | - |
| Includes | * Verify Account  (UC02) |
| Special Requirements: | - |
| Assumptions | User has a personal email |
| Notes and Issues | - |

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| Use Case ID: | UC02 | | |
| Use Case Name: | Verify Account | | |
| Created By: | Wee Teck | Last Updated By: | Gordon |
| Date Created: | 13 Feb 2023 | Date Last Updated: | 14 Feb 2023 |

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| Actor: | Database |
| Description: | System database verifies that the user account email and password exists and are matched. |
| Preconditions: | 1. Device must be connected to Wi-Fi or Mobile Data. 2. User must input their email and password. |
| Postconditions: | 1. User will be able to log in with their email account and password. |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. System queries the database to find a match between the submitted user email and password. 2. On a successful match of the email and password, the user is able to log in. |
| Alternative Flows: | **AF-S1:** **No Match Found**   1. There does not exist an email with such a corresponding password in the database. 2. System displays the message “Invalid email account or password”. 3. User is redirected back to the login page. |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC03 | | |
| Use Case Name: | Sign Up | | |
| Created By: | Hazel | Last Updated By: | Hazel |
| Date Created: | 13 Feb 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User, Account List |
| Description: | User signs up as a new user. System will store details of user into the database upon successful registration. User will be able to sign in as existing user. |
| Preconditions: | 1. Device must be connected to Wi-Fi or Mobile Data |
| Postconditions: | 1. New user data must be saved into account database 2. User must be able to log in after this |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. User clicks on “Sign Up” 2. System shows a sign up page with input fields to accept username, email, password and confirm password 3. User inputs a username, valid email, password and confirms password 4. System checks if email and password is valid 5. If yes, System logs new account data into database 6. System redirects and loads website, logging in to the newly created account |
| Alternative Flows: | **AF-S1: Email Address already exists**   1. If the email address already exists, system will display error message “Email already exists.” 2. Return to step 2   **AF-S2: Email Address is missing ‘@’**   1. If the email address is missing a @, system will display error message “Please include an ‘@’ in the email address.” 2. Return to step 2   **AF-S3: Password is not strong enough**   1. System displays error message “Password must be at least 7 characters.” 2. Return to step 2 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | User has an email address |
| Notes and Issues: | - |

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| Use Case ID: | UC04 | | |
| Use Case Name: | Take Test | | |
| Created By: | Chu Feng | Last Updated By: | Hazel |
| Date Created: | 13 Feb 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User |
| Description: | User selects “Take Test” to take the test. The test will allow the system to recommend to the user a set of courses and universities catered for them. |
| Preconditions: | 1. Device is connected to Wi-Fi or mobile data 2. User is currently logged into an account |
| Postconditions: | 1. Recommended schools and courses are displayed to the user after completing the test. |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. User selects  “Take Test” to begin taking the test via the following use cases    1. UC05: RIASEC Personality test    2. UC06: Input subject interests    3. UC07: Input academic qualification 2. System outputs course recommendations to the user via UC09: Recommendations |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | UC05: RIASEC Personality test  UC06: Input subject interests  UC07: Input academic qualifications  UC09: Recommendations |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC05 | | |
| Use Case Name: | RIASEC Personality Test | | |
| Created By: | Gordon | Last Updated By: | Hazel |
| Date Created: | 15 Feb 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User, Database |
| Description: | User answers questions about their personality. Users' results are saved to the database. |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data. 2. User is currently logged into an account. |
| Postconditions: | 1. User’s RIASEC personality test scores are recorded in the database 2. User is directed to the page to input subject interests |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. User is presented with a set of questions, and needs to check the checkboxes if they agree with the statement 2. User selects “Submit” to submit their information 3. System saves RIASEC personality test scores into the database. 4. System will then guide users to UC06: Input academic qualification |
| Alternative Flows: | **AF-S1: Missing input**   1. System displays error message “Missing input, please questions above” 2. Return to step 2. |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC06 | | |
| Use Case Name: | Input subject interests | | |
| Created By: | Hazel | Last Updated By: | Hazel |
| Date Created: | 7 Apr 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User, Database |
| Description: | User inputs their top three subject interests |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data. 2. User is currently logged into an account. 3. User has completed the RIASEC personality test. |
| Postconditions: | 1. User’s top three interested subjects are recorded in the database 2. User is directed to the page to input their academic portfolio |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. User is presented with 3 dropboxes to select their favorite subjects from the options presented 2. User selects “Submit” to submit their information 3. System saves user input into database. 4. System will then guide users to UC07: Input academic qualifications |
| Alternative Flows: | **AF-S1: Missing input**   1. System displays error message “Please select an item in the list” 2. Return to step 1. |
| Exceptions: | **-** |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC07 | | |
| Use Case Name: | Input academic qualifications | | |
| Created By: | Gordon | Last Updated By: | Hazel |
| Date Created: | 14 Feb 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User, Database |
| Description: | User inputs their academic qualifications |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data. 2. User is currently logged into an account. 3. User has completed the RIASEC personality test. 4. User has submitted their top three subject interests. |
| Postconditions: | 1. User’s academic qualifications, either in the form of GCE A Level grades or Polytechnic GPA, must be inputted 2. User will be directed to course recommendation page |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. User is presented with fields to submit their personal information including their academic qualifications. 2. They can toggle between ‘A Levels’ and ‘Polytechnic’. 3. The ‘A Levels’ option displays four dropdown boxes to select grades for their 3 H2 and 1 H1 subjects, while the ‘Polytechnic’ option displays an input field for User to input their GPA. 4. User selects “Submit” to submit their information. 5. System saves user input into database. 6. System will then guide users to UC08: Recommendations |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | School Diplomas include GCE A Levels and Polytechnic |

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| Use Case ID: | UC08 | | |
| Use Case Name: | Display RIASEC results | | |
| Created By: | Nichele | Last Updated By: | Nichele |
| Date Created: | 7 Apr 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User, Database |
| Description: | Users are able to view their RIASEC test results and their descriptions. |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data. 2. User is currently logged into an account. 3. User has completed the personality test. 4. User has submitted their top three subject interests. 5. User has submitted their academic qualifications. |
| Postconditions: | 1. User’s top 3 RIASEC types are displayed. 2. Detailed description of each RIASEC type displayed. |
| Priority: | Medium |
| Frequency of Use: | Low |
| Flow of Events: | 1. System retrieves User’s top 3 RIASEC types and their descriptions. 2. User is presented with their top 3 RIASEC types and their descriptions. |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC09 | | |
| Use Case Name: | Recommendations | | |
| Created By: | Gordon | Last Updated By: | Nichele |
| Date Created: | 15 Feb 2023 | Date Last Update: | 9 Apr 2023 |

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| Actor: | User |
| Description: | Users are able to view their Holland Code as well as the course and university recommendations for them. |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data. 2. User is currently logged into an account. |
| Postconditions: | 1. User can view Holland Code, course and university recommendations 2. User can use the Course Search function to efficiently look for specific course recommendations. |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. System outputs a set of recommendations to the user 2. User searches for specific course recommendations via UC14: Course Search. 3. User views detailed information of course and respective universities via UC10: View course-specific information |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC10 | | |
| Use Case Name: | View course-specific information | | |
| Created By: | Gordon | Last Updated By: | Hazel |
| Date Created: | 15 Feb 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User |
| Description: | System displays information about course and university |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data 2. User must be logged into an existing account 3. User has selected a recommendation |
| Postconditions: | System displays university description, ranking, Course description, ranking, IGP and employability outcomes of selected course as well as campus location. |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. System displays    1. University    2. IGP    3. UC08: Display RIASEC Results    4. Related Subjects    5. Prerequisite Subjects    6. Additional Requirements    7. UC11: Display GES Data |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | 1. UC08: Display RIASEC Results 2. UC11: Display GES Data |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC11 | | |
| Use Case Name: | Display GES Data | | |
| Created By: | Nichele | Last Updated By: | Nichele |
| Date Created: | 7 Apr 2023 | Date Last Updated: | 7 Apr 2023 |

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| Actor: | User, data.gov.sg API, Google Charts API |
| Description: | System displays more information about relevant course and university from the Graduate Employment Survey (GES) data retrieved from data.gov.sg. |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data 2. User must be logged into an existing account 3. User has selected a recommended course from a university. |
| Postconditions: | System displays information on the course employment rate (%), mean starting income (SGD), and a graph visualization of the change of starting salary over the years. |
| Priority: | Medium |
| Frequency of Use: | Medium |
| Flow of Events: | 1. System receives GES data from the data.gov.sg API. 2. System displays    1. Course Employment Rate (%)    2. Graduate Mean Starting Income (SGD)    3. Graph visualization of starting salary over the years. |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC12 | | |
| Use Case Name: | Compare Courses | | |
| Created By: | Nichele | Last Updated By: | Stephen |
| Date Created: | 9 Apr 2023 | Date Last Updated: | 9 Apr 2023 |

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| Actor: | User, data.gov.sg API, Google Charts API |
| Description: | Users can compare employment outcomes, starting salary and cut off grades between selected courses from specific universities. |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data 2. User must be logged into an existing account |
| Postconditions: | System displays bar graphs that compare employment outcomes, starting salary and cut off grades between selected courses from the specified university. |
| Priority: | Medium |
| Frequency of Use: | Medium |
| Flow of Events: | 1. User selects courses from specific universities that he/she wishes to compare. 2. System receives GES data from the data.gov.sg API to get information on employment outcomes. 3. System plots and displays bar graphs for the respective courses, comparing    1. Graduate Employment Rate    2. Starting Salary    3. A level cutoff grade    4. Polytechnic cutoff grade |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC13 | | |
| Use Case Name: | View All Courses | | |
| Created By: | Nichele | Last Updated By: | Nichele |
| Date Created: | 9 Apr 2023 | Date Last Updated: | 9 Apr 2023 |

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| Actor: | User |
| Description: | User can view all courses that each university offers. |
| Preconditions: | 1. Device is connected to Wi-Fi or Mobile Data 2. User must be logged into an existing account |
| Postconditions: | System displays a search bar, as well as lists of all courses, grouped by university. |
| Priority: | Medium |
| Frequency of Use: | Low |
| Flow of Events: | 1. System displays the lists of all courses under each university. 2. User can search for a specific course via UC14: Course Search. 3. User can click on the course they want to know more, and then clicking on the magnifying glass icon will take them to course specific page 4. User will be directed to UC10: View course-specific information page to view information about course |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC14 | | |
| Use Case Name: | Course Search | | |
| Created by: | Stephen | Last Updated by: | Stephen |
| Date created: | 9 April 2023 | Date Last Updated: | 9 Apr 2023 |

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| Actor | User |
| Description | Users can search for specific information about a particular course. |
| Preconditions | 1. Device is connected to Wi-Fi or Mobile Data 2. User must be logged into an existing account. 3. User must be in “View all Courses” or “Recommendations” page |
| Postconditions | 1. Users will be brought to page with detailed information |
| Priority | Medium |
| Frequency of Use | Medium |
| Flow of events | 1. The user is required to enter the name of a particular course into the dropdown search bar. 2. The user selects one of the available options and will be directed to UC10: View course-specific information page to view information about the course. |
| Alternative flow: | AF-S1: The course does not exist   1. If there are no available courses to select, then the particular course does not exist 2. Return to step 1. |
| Exceptions: | - |
| Includes | UC10: View course-specific information |
| Special Requirements: | - |
| Assumptions | User has a personal email. |
| Notes and Issues | - |