**Software Requirements Specification: User Registration and Authentication**

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| **Req. Code** | **Req. Description** | **Use Case** |
| **URA-F-1.0** | The system shall allow new users to register an account. | User Registration |
| **URA-F-1.1** | The system shall require a unique email for each user account. | User Registration |
| **URA-F-1.2** | The system shall require a password that meets defined complexity criteria (e.g., minimum length, uppercase/lowercase, numbers, special characters). | User Registration |
| **URA-F-1.3** | The system shall require password confirmation during registration. | User Registration |
| **URA-F-1.4** | The system shall validate all registration fields to ensure required information is provided and is in the correct format. | User Registration |
| **URA-F-1.5** | The system shall store user registration information securely in a database. | User Registration |
| **URA-F-1.6** | The system shall send an email to the registered email address. | User Registration |
| **URA-UR-1.7** | The system shall provide appropriate error messages to the user during registration if validation fails. | User Registration |
| **URA-F-1.8** | The system shall allow registered users to log in with their email and password. | User Login |
| **URA-F-1.9** | The system shall verify user credentials against stored data. | User Login |
| **URA-F-1.10** | The system shall allow users to login using password-based authentication. | User Login |
| **URA-NF-1.11** | The system shall implement secure password handling by not storing passwords in plaintext. | User Login |
| **URA-F-1.12** | Upon successful login, the system shall create a session for the logged-in user. | User Login |
| **URA-F-1.13** | Upon successful login, the system shall redirect the user to the appropriate default page. | User Login |
| **URA-F-1.14** | The system shall allow logged-in users to log out securely. | User Logout |
| **URA-F-1.15** | The system shall invalidate user session after logging out. | User Logout |
| **URA-UR-1.16** | The system shall display an error message to the user if login fails (invalid username/password). | User Login |
| **URA-F-1.17** | The system shall provide a "Forgot Password" feature. | Password Reset |
| **URA-F-1.18** | The system shall send a password reset link (or code) to the user's registered email address. | Password Reset |
| **URA-F-1.19** | The system shall allow users to reset their password using the received link (or code). | Password Reset |
| **URA-F-1.20** | The system shall ensure the password reset link is time limited. | Password Reset |
| **URA-NF-1.21** | The system shall encrypt sensitive data, like passwords, at rest and in transit. | Security |
| **URA-NF-1.22** | The system shall protect against common security vulnerabilities (e.g., SQL injection, cross-site scripting). | Security |
| **URA-NF-1.23** | The system shall not store passwords or email reset links in plain text | Security |
| **URA-NF-1.24** | The system shall protect access to user accounts through strong authentication and authorization | Security |
| **URA-NF-1.25** | The system shall respond to user requests (e.g., login, registration) | General |
| **URA-UR-1.26** | The system shall provide clear visual feedback to the user during any processing that takes longer than **1 second**. | General |
| **URA-UR-1.27** | The user interface shall adapt to various screen sizes (desktop, tablet, mobile) without loss of functionality or usability. | General |

**Software Requirements Specification: Resume-Based Job Recommendation System**

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| **Req. Code** | **Req. Description** | **Use Case** |
| **JRS-F-1.0** | The system shall allow users to upload their resume in a common format (e.g., PDF). | Resume Upload |
| **JRS-F-1.1** | The system shall parse the uploaded resume to extract text content. | Resume Parsing |
| **JRS-F-1.2** | The system shall identify and extract relevant skills mentioned in the resume using Natural Language Processing (NLP) techniques (e.g., Named Entity Recognition, keyword extraction). | Skills Extraction |
| **JRS-F-1.3** | The system shall categorize skills into predefined categories (e.g., Programming Languages, Databases, Frameworks, Cloud Technologies, etc.). | Skills Categorization |
| **JRS-F-1.4** | The system shall analyze the extracted skills and job titles/descriptions in the resume to determine the developer type (e.g., Frontend, Backend, Full-Stack, Mobile, DevOps, etc.). | Developer Type Inference |
| **JRS-F-1.5** | The system shall create a skills profile for each user based on the extracted and categorized skills. | User Profile Generation |
| **JRS-F-1.6** | The system shall calculate the cosine similarity between the user's skills profile and job profile for all job postings in the system. | Similarity Calculation |
| **JRS-F-1.7** | The system shall rank job postings based on their cosine similarity score to a user's skill profile. | Job Ranking |
| **JRS-F-1.8** | The system shall recommend the top N job postings with highest cosine similarity score to the user. (where N is configurable) | Job Recommendation |
| **JRS-F-1.9** | The system shall display recommended job postings to the user in an understandable format, including job title, company, short description, and a link to the full posting. | Job Display |
| **JRS-F-1.10** | The system shall allow user to see the similarity score between his profile and the job recommended. | Job Display |

**Software Requirements Specification: Job Management System**

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| **Req. Code** | **Req. Description** | **Use Case** |
| **JMS-F-1.0** | The system shall allow registered clients to post new job openings. | Job Posting |
| **JMS-F-1.1** | Job postings shall include a job title, description, required skills, salary range. | Job Posting |
| **JMS-F-1.2** | The system shall allow employers to edit existing job postings. | Job Editing |
| **JMS-F-1.3** | Clients shall be able to modify all fields of a job posting. | Job Editing |
| **JMS-F-1.4** | The system shall allow clients to delete job postings. | Job Deletion |
| **JMS-F-1.5** | The system shall provide confirmation before permanently deleting a job posting. | Job Deletion |
| **JMS-F-1.6** | The system shall store job postings in a database. | Job Management |
| **JMS-UR-1.7** | The system shall display job postings in a user-friendly format to job seekers. | Job Browsing |
| **JMS-F-1.8** | Job seekers should be able to filter job listings based on various criteria. | Job Browsing |
| **JMS-F-1.9** | The system shall support pagination for long lists of job postings. | Job Browsing |
| **JMS-F-1.10** | The system shall allow employers to browse talent profiles. | Talent Viewing |
| **JMS-F-1.11** | The system shall allow employers to search talent profiles based on criteria. | Talent Viewing |
| **JMS-F-1.12** | Employers shall be able to see talent profiles which includes all information | Talent Viewing |
| **JMS-F-1.13** | The system shall allow job seekers to bid on job postings. | Job Bidding |
| **JMS-F-1.14** | Job seekers shall be able to submit a bid with a personalized message (cover letter). | Job Bidding |
| **JMS-F-1.15** | The system shall notify employers of new bids on their job postings. | Job Bidding |
| **JMS-F-1.16** | Job seekers shall be able to view all the jobs on which they bid. | Job Bidding |
| **JMS-F-1.17** | The system shall allow employers to view bids on their job postings. | Hiring Process |
| **JMS-F-1.18** | Employers shall be able to view job seeker profiles associated with bids. | Hiring Process |
| **JMS-F-1.18** | The system shall allow employers to select a job seeker for hiring. | Hiring Process |
| **JMS-F-1.19** | The system shall notify job seekers if they have been selected for a job. | Hiring Process |
| **JMS-F-1.20** | The system shall notify other job seekers of the job being filled. | Hiring Process |
| **JMS-F-1.21** | The system shall store information about the hiring process. | Hiring Process |
| **JMS-F-1.22** | The system shall implement authentication for employers and job seekers using a unique identifier and password. | Authentication |
| **JMS-NF-1.23** | The system shall implement data validation and sanitization for all user inputs. | Security |

**Software Requirements Specification: Review Management System**

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| **Req. Code** | **Req. Description** | **Use Case** |
| **RMS-F-1.0** | The system shall allow employers to submit reviews for developers they have hired. | Review Creation |
| **RMS-F-1.1** | Reviews shall include a rating (e.g., on a scale of 1-5 stars) and an optional text-based comment. | Review Creation |
| **RMS-F-1.2** | Reviews shall be associated with the specific developer profile they were given for. | Review Association |
| **RMS-F-1.3** | The system shall not allow users to review themselves. | Review Restriction |
| **RMS-F-1.4** | Employers shall only be able to review a developer after completing a hiring process with them. | Review Restriction |
| **RMS-F-1.5** | The system shall display the average rating for each developer profile. | Review Display |
| **RMS-F-1.6** | The system shall display all individual reviews on the developer profile page. | Review Display |
| **RMS-F-1.7** | The system shall display the reviewer’s name or alias with each review. | Review Display |
| **RMS-F-1.8** | Reviews shall be displayed in chronological order (most recent first). | Review Display |
| **RMS-F-1.9** | The system shall not allow employers to edit or delete reviews they have submitted after they have been posted. | Review Restriction |

**Software Requirements Specification: Chat System**

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| **Req. Code** | **Req. Description** | **Use Case** |
| CHAT-F-1.0 | The system shall allow users to send messages to other users. | Message Sending |
| CHAT-F-1.1 | Users shall be able to send text-based messages. | Message Sending |
| CHAT-F-1.2 | The system shall display the sender's name or alias with each message. | Message Display |
| CHAT-F-1.3 | The system shall display messages in chronological order (earliest first). | Message Display |
| CHAT-F-1.4 | The system shall provide visual notifications when new messages are received. | Message Notification |
| CHAT-F-1.5 | The system shall persist messages for future access. | Message Persistence |
| CHAT-F-1.6 | Users shall be able to search through their message history. | Message Retrieval |
| CHAT-F-1.7 | Users shall be able to initiate a chat with another user through their profile page. | Chat Initiation |
| CHAT-F-1.8 | Users shall be able to delete their own messages after sending. | Message Management |