**Software Requirements Summary**

This section outlines the complete software requirements for the "SchoolCentre UG" platform, ensuring all aspects of functionality, security, and performance are covered.

**1. Platform & Development Requirements**

* Web-Based Application: Accessible via browsers (mobile & desktop).
* Future Mobile App: Native Android & iOS apps (planned for later phases).
* Cloud Hosting: Secure and scalable cloud-based hosting (AWS, Azure, or DigitalOcean).

**2. Core Functionalities & Features**

A. School Directory & Search System

* Search for schools based on:
  + Location (District, town, or within a radius).
  + Curriculum (National, IGCSE, IB, American, etc.).
  + School Type (Nursery, Primary, Secondary, Vocational, International).
  + Fee Range (Filter by tuition cost).
  + Boarding Options (Day, Boarding, or Mixed).
  + Ratings & Reviews (User-submitted feedback).
* Advanced Search & Filtering (Multi-parameter filtering for precision).
* Search Engine Integration (Elasticsearch or Algolia for fast results).

B. Detailed School Profiles

* Profile includes:
  + School Name & Address (Verified contact details).
  + Photos & Videos (Campus, classrooms, sports, and facilities).
  + Fee Structure (Tuition and other costs).
  + Facilities Available (Library, labs, sports, transport, etc.).
  + Academic Performance Records (Exam results & rankings).
  + Extracurricular Activities (Clubs, music, sports, etc.).
  + Admission Requirements & Process (Eligibility & application details).
  + Social Media & Website Links (For further engagement).

C. User Reviews & Ratings

* Verified User Reviews (Only registered parents & students can post).
* Star Ratings (Quality, academic performance, facilities, etc.).
* Moderation System (To prevent spam or fake reviews).

D. Comparison Tool

* Users can compare up to three schools side by side based on:
  + Fees
  + Facilities
  + Academic performance
  + Reviews & ratings

E. School Marketing & Advertising

* Premium Listings (Featured schools appear at the top).
* Sponsored Banners (Homepage and search results).
* Social Media Promotions (Schools can opt for online marketing campaigns).
* Video Advertisements (On school profile pages and banners).

F. Admission Inquiry & Application Assistance

* Direct Contact System (Parents can message schools via the platform).
* Application Submission (Submit applications directly through the site).
* Commission System (5% fee for admissions submitted via platform).

G. Blog & Educational Resources

* Articles on School Selection (Guides for parents and students).
* Exam Preparation Tips (Best practices for academic success).
* Ugandan Education Policy Updates (Changes in regulations).

H. Mobile Compatibility & App Integration

* Fully Responsive Website (Optimized for all devices).
* Mobile App Development (Future Android & iOS apps with push notifications).

**3. User Roles & Access Control bob**

* Parents & Students: Search, compare, review, and inquire about schools.
* Schools & Administrators: Manage profiles, update information, and subscribe to marketing services.
* Platform Admins: Oversee content, manage ads, moderate reviews, and handle payments.

**4. Technology Stack**

A. Frontend

* React.js / Next.js (Fast, interactive, and SEO-friendly UI).
* Tailwind CSS / Bootstrap (Responsive and modern design).

B. Backend

* Spring Boot (Java) (Scalable and secure API backend).
* RESTful APIs (For communication between frontend and backend).

C. Database & Storage

* PostgreSQL / MySQL (For structured school data).
* Cloud Storage (AWS S3 / Firebase Storage) (For images and videos).
* Redis / Memcached (For caching frequently accessed data).

D. Search & Filtering

* Elasticsearch / Algolia (For fast and efficient search functionality).

E. Authentication & Security

* OAuth / JWT Authentication (For secure user access).
* SSL Encryption (To protect user data).
* Role-Based Access Control (RBAC) (For managing user permissions).

F. Payment & Monetization

* Mobile Money Integration (MTN Mobile Money, Airtel Money).
* Credit/Debit Card Payments (Stripe, Flutterwave, or Paystack).
* Automated Billing System (For premium listings and advertisements).

G. Performance & Scalability

* Optimized Database Queries (For faster search and filtering).
* Content Delivery Network (CDN) Integration (For quicker loading).
* Background Job Processing (For handling bulk uploads, notifications, etc.).

H. Security & Compliance

* Data Privacy Compliance (GDPR-like protection for user data).
* Two-Factor Authentication (2FA) (For admin and sensitive user accounts).

5. Monetization & Revenue System

A. Premium School Listings

* Paid Plans (Silver, Gold, Platinum) for featured visibility.

B. Advertisements

* Homepage Banners & Side Ads (Paid advertising for schools & businesses).

C. Subscription for Parents & Students

* Exclusive Scholarship Listings
* Direct Consultation with Education Experts

D. Application Commissions

* 5% commission on school admission fees submitted via platform.

E. Affiliate Partnerships

* Referrals to bookstores, uniform suppliers, and education consultants.

**6. Deployment & Maintenance**

* Cloud Hosting (AWS, Azure, or DigitalOcean).
* Continuous Integration & Deployment (CI/CD) (For seamless updates).
* Regular Database Updates (For new school listings).
* Bug Fixes & Security Patches (Routine updates for security).

**7. Future Enhancements**

* AI-Powered School Recommendations (Personalized suggestions).
* Scholarship Matching System (Based on eligibility and preferences).
* Live Chat Support (For parent-school communication).
* Alumni Network (Connect students with past graduates).

**Conclusion**

This software system will provide a scalable, secure, and efficient platform for school discovery in Uganda. By incorporating advanced search, marketing tools, and a seamless user experience, SchoolCentre UG aims to revolutionize how schools connect with parents and students.

