**Comprehensive Verification And Validation Plan**

**Booking Management Subsystem**

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| **#** | **Test Name** | **Test Input** | **Conditions/Test** | **Expected Output** |
| 1. | Select Module | Module name | Module Available | Display Tutors for module |
|  |  | Module name | Module Unavailable | Display error message |
| 2 | Tutor Location | Location | Coordinates Accurate | Student and Tutor Location displayed on a live map |
|  |  | Location | Location not Found | Error message is displayed |
| 3 | Select Tutor | Click Tutor Profile |  | Display Profile Information |
| 4 | Booking form | Booking Details | Correct booking format and details | Display populated form |
|  |  | Booking details | Incorrect booking format and details | Redirect to empty form |
| 5 | Add Payment | Booking Amount | Accept booking amount | Redirect to payment gate |
|  |  | Booking Amount | Decline Booking amount | Redirect to Booking form |
| 6 | Make Payment | Card details | Valid card details | Proceed to payment |
|  |  | Card details | Invalid card details | Error message, retry |
| 7 | Process Payment | Fee | Sufficient funds | Complete booking |
|  |  | Fee | Insufficient funds | Booking incomplete |
| 8 | Manage Booking | Booking details | View booking | Show booking details |
|  |  | Booking details | Cancel booking | Remove booking session |
|  |  | Booking details | Update booking | Display booking form |

**Invoice Management Subsystem**

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| **#** | **Test Name** | **Test Input** | **Condition/Test** | **Expected Output** |
| 1 | Generate Invoices | Payment details | Successful payment | Issue invoice |
| 2 | Manage Invoices | Invoice ID | View invoice | Show invoice details |
|  |  | Invoice ID | Update invoice | Display invoice form |
|  |  | Invoice ID | Delete Invoice | Remove invoice |

**User Management Subsystem**

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| **#** | **Test Name** | **Test Input** | **Conditions/Test** | **Expected Output** |
| 1. | User Authentication | Username  Password | User exists and password correct | Authenticate the user.  Redirect the user to home page |
|  |  | Username  Password | User does not exist | Display an authentication error message |
|  |  | Username  Password | User exists but the password is incorrect | Display an authentication error message, prompt user to retry |
|  |  | Username  Password | User exists and password is correct but the account is disabled | Display contact administrator message |
| 2. | User Registration | User Details | User does not exist | Register the user.  Redirect the user to home page |
|  |  | User Details | User exists | Display registration error message, redirect to Login Page |
| 3. | Manage account | User email | Email exists and valid | Update or Remove Account |
|  |  | User email | Email exists but Invalid | Error Message, Retry |
| 4. | Upload Qualifications | Files | Wrong format,  File too large | Error message, try again |
|  |  | Files | Correct format | File upload |

**In-Session Management Subsystem**

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| **#** | **Test Name** | **Test Input** | **Condition/Test** | **Expected Output** |
| 1. | Extend Time | Time (SAST) format | Correct time | Display new time slot |
|  |  | Time (SAST) format | Time has elapsed | Display error message |
| 2 | Make Payment | Card details | Valid card details | Proceed to payment |
|  |  | Card details | Invalid card details | Error message, retry |
| 3 | Process Payment | Fee | Sufficient funds | Complete booking |
|  |  | Fee | Insufficient funds | Booking incomplete |

**Session Management Subsystem**

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| --- | --- | --- | --- | --- |
| **#** | **Test Name** | **Test Input** | **Condition/Test** | **Expected Output** |
| 1 | Create Session | Session Details | Valid details | Add session |
| 2 | Delete Session | Session ID | Confirm deletion | Remove session |
|  |  | Session ID | Cancel deletion | Redirect to the sessions page |
| 3 | Manage tutor | Tutor qualifications,  Quiz score | Add tutor account | Notify tutor: accepted |
|  |  | Tutor qualifications,  Quiz score | Remove tutor account | Notify tutor: declined |

**Report Management Subsystem**

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| **#** | **Test Name** | **Test Input** | **Condition/Test** | **Expected Output** |
| 1 | Generate Reports | Session details | Successful Session | Issue report |
|  |  | Session details | Cancelled Session: Before 24 hours | Issue report |
|  |  | Session Details | Cancelled Session: Within 24 hours | Notify user: pending payment |
| 2 | Manage Reports | Report ID | View report | Display report details |
|  |  | Report ID | Update report | Display report form |
|  |  | Report ID | Delete Report | Remove report |