## **Test Report for the EMS Project**

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### **Report Summary**

**Project Name:** EMS Website Development  
**Testing Period:** 1 May, 2025 - 9 may, 2025  
**Report Date:** 10 May, 2024  
**Prepared By:** Abdur Rouf

### **1. Summary of Testing Activities**

* **Test Plan Execution:** Executed a total of 32 test cases.
* **Test Phases Covered:** Functional Testing, Usability Testing, Performance Testing.
* **Testing Tools Used:** Selenium, JMeter, web browser.

### **2. Test Results**

#### **Test Case Execution**

* **Total Test Cases:** 32
  + **Passed:** 26
  + **Failed:** 4
  + **Blocked:** 2

#### **Defect Summary**

* **Total Defects Logged:** 4
  + **Critical:** 1
  + **High:** 1
  + **Medium:** 0
  + **Low:** 2
* **Defects Fixed:** 0
* **Defects Remaining:** 4

### **3. Metrics**

* **Test Coverage:** 85%
* **Defect Density:** 0.02 defects per function point
* **Defect Detection Rate:** 1.8 defects per day
* **Test Effort:** 4 hours

### **4. Risks and Issues**

* **High Priority Issue:**
  + **Description:** Adding teachers and other staff.
  + **Impact:** High; prevents users from accessing other facilites.
  + **Mitigation:** added a teacher by the developers.
* **Medium Priority Issue:**
  + **Description:** Search functionality returns incorrect results for certain keywords.
  + **Impact:** Medium; affects user experience and search accuracy.
  + **Mitigation:** Scheduled for fix in the next sprint.

### **5. Recommendations**

* **Search Functionality:** Enhance the search algorithm and perform additional testing to ensure accuracy.
* **Regression Testing:** Schedule regression testing before each release to ensure that recent changes do not introduce new defects.

### **6. Detailed Test Results**

#### **Functional Testing**

* **Modules Covered:** Exam, Class Routine, Leave Management.
* **Results:** more or less worked so far.

#### **Usability Testing**

* **Feedback:** Positive user feedback on site navigation and design. Some suggestions for improvement in the checkout process.
* **Results:** 85% positive responses, 10% neutral, 5% negative.

#### **Performance Testing**

* **Load Test Results:** Site can handle up to 1000 concurrent users with acceptable response times. Issues noted with payment gateway under high load.
* **Stress Test Results:** Site performance degrades significantly beyond 1500 concurrent users. Optimization required.

### **7. Next Steps**

* Address remaining defects and retest.
* Conduct a regression test before the next release.
* Perform additional performance and security testing as needed.

### **8. Conclusion**

The testing phase for the e-commerce website was completed successfully, with a high rate of test case execution and defect detection. The majority of the critical and high-severity defects have been addressed. However, some issues remain, particularly with the payment gateway under load. Further testing and optimization are recommended to ensure a smooth user experience.

**Prepared by:**Abdur Rouf  
Student CSE at IUBAT  
rouf3202@gmail.com