### **Testing Documents**

#### **Test Cases and Results**

**Test Case ID**: TC-001  
**Description**: Verify sleep tracking accuracy.  
**Steps**:

1. Set up sleep environment.
2. Wear Galaxy Watch.
3. Activate sleep tracking. **Expected Result**: Accurate detection of sleep stages.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 05-Oct-2023

**Test Case ID**: TC-002  
**Description**: Verify heart rate monitoring during physical activity.  
**Steps**:

1. Perform moderate-intensity exercise.
2. Monitor heart rate on Galaxy Watch. **Expected Result**: Accurate heart rate readings.  
   **Actual Result**: Minor discrepancies observed.  
   **Tester**: Emily Davis  
   **Date**: 06-Oct-2023

**Test Case ID**: TC-003  
**Description**: Verify stress level detection.  
**Steps**:

1. Simulate stressful scenarios.
2. Monitor stress levels on Galaxy Watch. **Expected Result**: Accurate detection of stress levels.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 07-Oct-2023

**Test Case ID**: TC-004  
**Description**: Verify activity recognition for running.  
**Steps**:

1. Perform running activity.
2. Monitor activity recognition on Galaxy Watch. **Expected Result**: Correct classification of running activity.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 08-Oct-2023

**Test Case ID**: TC-005  
**Description**: Verify calorie tracking accuracy.  
**Steps**:

1. Log food intake in Samsung Health app.
2. Perform physical activities.
3. Monitor calorie expenditure on Galaxy Watch. **Expected Result**: Accurate calorie tracking.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 09-Oct-2023

**Test Case ID**: TC-006  
**Description**: Verify hydration monitoring reminders.  
**Steps**:

1. Log water intake in Samsung Health app.
2. Monitor hydration reminders on Galaxy Watch. **Expected Result**: Timely hydration reminders based on activity levels.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 10-Oct-2023

**Test Case ID**: TC-007  
**Description**: Verify custom workout plan creation.  
**Steps**:

1. Set fitness goals in Samsung Health app.
2. Create a custom workout plan.
3. Follow the workout plan. **Expected Result**: Custom workout plan accurately reflects fitness goals and preferences.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 11-Oct-2023

**Test Case ID**: TC-008  
**Description**: Verify sleep coaching feature.  
**Steps**:

1. Log sleep data for one week.
2. Monitor sleep coaching tips in Samsung Health app. **Expected Result**: Personalized sleep coaching tips based on sleep data.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 12-Oct-2023

**Test Case ID**: TC-009  
**Description**: Verify fitness challenge participation.  
**Steps**:

1. Join a fitness challenge in Samsung Health app.
2. Monitor progress and leaderboard status. **Expected Result**: Accurate tracking of challenge progress and leaderboard updates.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 13-Oct-2023

**Test Case ID**: TC-010  
**Description**: Verify health data export functionality.  
**Steps**:

1. Select health data for export in Samsung Health app.
2. Export data to external application. **Expected Result**: Successful export of health data in selected format.  
   **Actual Result**: Test passed.  
   **Tester**: Emily Davis  
   **Date**: 14-Oct-2023

**Test Plan**

**Objective**: To verify the functionality and performance of new features implemented in the Samsung Health and Galaxy Watch.

**Scope**: The testing will cover sleep tracking, heart rate monitoring, stress level detection, activity recognition, calorie tracking, hydration monitoring, custom workout plans, sleep coaching, fitness challenges, and health data export.

**Test Strategy**:

1. **Functional Testing**: Verify that each feature works as expected.
2. **Performance Testing**: Ensure that the features perform well under expected load.
3. **Usability Testing**: Ensure that the features are easy to use and understand.
4. **Security Testing**: Verify that user data is protected and secure.

**Test Cases**:

* A detailed list of 10 test cases provided above.

**Resources**:

* Testers: Emily Davis, John Kim
* Devices: Samsung Galaxy Watch, compatible smartphone

**Schedule**:

* Testing Phase: 30-Sep-2023 to 13-Oct-2023
* Daily testing reports will be generated and reviewed.

**Bug Report ID**: BR-001  
**Description**: Minor discrepancies in heart rate readings during physical activity.  
**Steps to Reproduce**:

1. Perform moderate-intensity exercise.
2. Monitor heart rate on Galaxy Watch. **Expected Result**: Accurate heart rate readings.  
   **Actual Result**: Heart rate readings show minor discrepancies.  
   **Severity**: Medium  
   **Reported By**: Emily Davis  
   **Date**: 06-Oct-2023  
   **Status**: Open

**Bug Report ID**: BR-002  
**Description**: Inconsistent hydration reminders.  
**Steps to Reproduce**:

1. Log water intake in Samsung Health app.
2. Monitor hydration reminders on Galaxy Watch. **Expected Result**: Timely hydration reminders based on activity levels.  
   **Actual Result**: Hydration reminders are inconsistent.  
   **Severity**: Low  
   **Reported By**: Emily Davis  
   **Date**: 10-Oct-2023  
   **Status**: Open

**Bug Report ID**: BR-003  
**Description**: Exported health data missing some entries.  
**Steps to Reproduce**:

1. Select health data for export in Samsung Health app.
2. Export data to external application. **Expected Result**: Successful export of all selected health data.  
   **Actual Result**: Some health data entries are missing in the export.  
   **Severity**: High  
   **Reported By**: Emily Davis  
   **Date**: 14-Oct-2023  
   **Status**: Open

**Test Summary Report**

**Overview**: The testing phase for the Samsung Health and Wearable Integration Enhancement project was conducted from 30-Sep-2023 to 13-Oct-2023. The objective was to verify the functionality and performance of the new features implemented in the Samsung Health app and Galaxy Watch.

**Key Findings**:

* All 10 test cases were executed.
* 7 test cases passed without any issues.
* 3 test cases revealed minor to major issues that need to be addressed.

**Issues Identified**:

1. Minor discrepancies in heart rate readings during physical activity (Bug Report ID: BR-001).
2. Inconsistent hydration reminders (Bug Report ID: BR-002).
3. Exported health data missing some entries (Bug Report ID: BR-003).

**Recommendations**:

* Address the identified issues and retest the affected features.
* Continue to monitor the performance and usability of the new features.

**Conclusion**: The testing phase was successful in identifying key issues that need to be addressed before the final deployment. The team is confident that once these issues are resolved, the new features will provide a valuable enhancement to the Samsung Health app and Galaxy Watch.