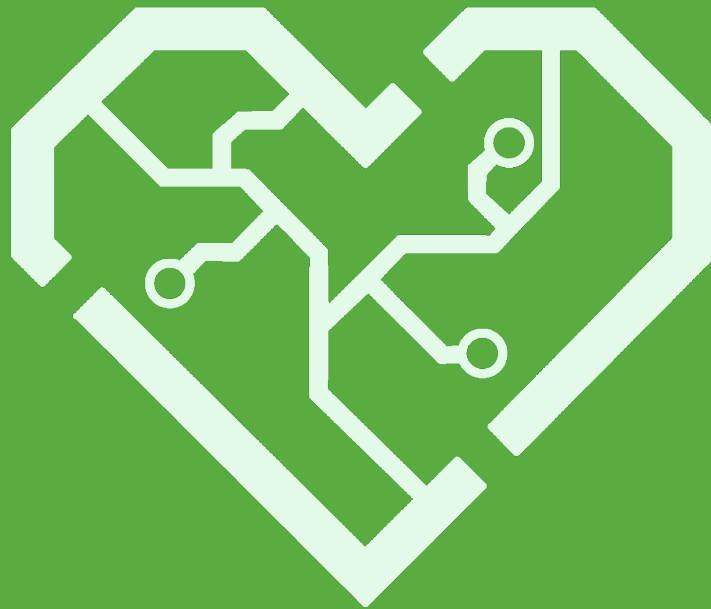


## ATHLETICINNOVATIONS

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# RunWare

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## System Test Plan for RunWare:

To test the fully integrated system, the following plan has been put in place. Members of the Athletic Innovations team ensure that both female and male prototype versions of RunWare are functioning according to guidelines set by the Functional Specifications and Design Specifications for RunWare.

### Test Sheet

RunWare

Date:

### Heart Rate Detection

#### Heart Rate Sensor

Comments:

Can detect pulse from fingertip:

☐ Yes (pass) ☐ No (fail)

### Light System

#### EL Wire

Comments:

Is easily visible in the dark:

☐ Yes(pass) ☐ No (fail)

Can be switched to indoor mode via app:

☐ Yes (pass) ☐ No (fail)

In low light conditions, EL wire is illuminated automatically when in outdoor mode:

☐ Yes (pass) ☐ No (fail)

### Microcontroller

#### Bluetooth Module

Comments:

Pairs with Phone:

☐ Yes (pass) ☐ No (fail)

Receives signal from App :

☐ Yes (pass) ☐ No (fail)

Sends signal to App :

☐ Yes (pass) ☐ No (fail)

Plays music from phone:



<input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Can receive phone calls: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Call accept button accepts calls: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Call end button ends calls: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail)	
Heart Rate Sensor	Comments:
Measure resting BPM: 60 - 100 <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No(fail) Measured BPM is $\pm 2$ BPM of Heart Rate found using a heart rate watch: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Gives App correct BPM value when called: <input type="checkbox"/> Yes(pass) <input type="checkbox"/> No (fail) Pulse sensor turns on for 5 seconds when Heartrate button is pressed: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail)	

Microcontroller	
Accelerometer	Comments:
Measured step count for 500m is $\pm 5$ of step count found using a pedometer: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Gives App correct step count when called: <input type="checkbox"/> Yes(pass) <input type="checkbox"/> No (fail)	

Audio	
Speaker Circuit	Comments:
Is able to play music from source: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Phone calls are audible: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail)	
Microphone Circuit	Comments:
Is able to receive voice signal: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Microphone input is audible:	



<input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Accepts voice commands to App: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail)	
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RunWare App	
GPS	Comments:
Show's user's location: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Tracks user's movement: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Calculates distance: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Calculates calories: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail)	
Features	Comments:
Updates Heartrate to latest value: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Updates steps to latest value: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Run can be started using voice commands: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail) Run can be ended using voice commands: <input type="checkbox"/> Yes (pass) <input type="checkbox"/> No (fail)	