RunMate User Manual:

Introduction:
This simulator is designed for long-distance runners who want real-time feedback and updates on their physiological and environmental circumstances during their runs.

Description:
When launching RunMate, you will see a window divided into four different sections:

- **Information Section**: Displays the user's current heartbeat, exertion level (ranging from 1-10), blood pressure, and cadence (steps/minute). These metrics change over time based on the chosen workout intensity and status.
- **Intensity Section**: Here you can select the desired intensity level for your current workout. Choosing an intensity level is required to initiate a workout.
- **Updates Section**: This section allows you to change the type of auditory feedback you want to receive. The available options are: All, Physiological, or Environmental.
- **Workout Section**: This section is where you can start, pause, or stop your workout.

How to use the Simulator:
To use the simulator, first select the workout intensity and the type of updates you want to receive and then press “Start" in the workout section. You will begin to receive auditory feedback based on your choices. Additionally, the User Interface provides some feedback about your current physiological and biomechanical states in the “Information” section. If you need to take a break, you can press “Pause”, and if you want to end your workout you can press “Stop”. The volume of the feedback can be adjusted using the volume slider located at the bottom of the interface, and you can also modify the low-pass frequency of the audio by utilizing the slider above it.

How to experience the different scenarios:
The simulator provides different scenarios based on the options you select. The intensity and the type of updates chosen determine the auditory feedback you will receive. To experience all the possible scenarios, you will need to try out the different available options. To be more specific, depending on the intensity level you selected, the simulator modifies the information presented on the screen and the auditory feedback you receive to reflect realistic physiological and biomechanical values. Additionally, the kind of updates you select will also affect the frequency and the type of feedback you receive. The Physiological option provides cues on your current form, your physiological state, and offers nutrition and hydration recommendations. The Environmental option provides you with updates on the weather, traffic, optimal routes, and terrain types. By default, all types of feedback are activated.

Sonification Scheme:
The data modifies the auditory feedback you receive in two different ways. First, there are auditory cues that are only triggered when the user's heartbeat reaches specific

thresholds. Second, the simulator creates audio that reflects your real-time physiological data, offering instant feedback based on your current data.

Notes:
1. The physiological and biomechanical data displayed in the user interface are currently randomly generated. However, if provided with the right sensors, they can be replaced with real-time data and would result in similar results.
2. You will get audio feedback every 5-10 seconds, depending on the options selected.
3. The data in the “Information” section in the UI interface is updated every 2 seconds.
4. The low-pass filter is not applied to TTS sounds to prevent unpleasant audio effects.