

# Design Document

Dimitar Matev  
Student N: 2986560  
Dimo Popov  
Student N: 2974541  
Maik Henckens  
Student N: 371414  
Ingo van Stappershoef  
Student N: 408497

<b>Inspiration phase</b>	<b>3</b>
Nike Run Club	3
Description	3
Features	3
Runkeeper - Sport-app with gps	4
Description	4
Features	4
Adidas Running App	5
Description	5
Features	5
Garmin Connect	6
Description	6
Features	6
Run The Music	7
Description	7
Features	7
Rock My Run	8
Description	8
Features	8
<b>Idea generation</b>	<b>9</b>
Rapid ideation	9
Starbursting	10
<b>User Personas</b>	<b>11</b>
<b>App Description</b>	<b>13</b>
<b>User requirements</b>	<b>14</b>
<b>Use Case 1</b>	<b>15</b>
<b>Use Case 2</b>	<b>16</b>

Inspiration for low fidelity prototype	17
<b>Prototype</b>	
First sketch	17
Styleguide (font)	18
Design	19
<b>Application infrastructure &amp; Technologies</b>	<b>21</b>
Database	21
Back-end	21
iOS	21

# Inspiration phase

In this phase we will take a look at existing products that you can already download.

## Nike Run Club



## Description

Nike Run Club: your perfect running buddy

Nike Run Club has the tools you need to run even better, including GPS tracking, weekly, monthly and personalized distance challenges; custom training schedules for your goals and non-stop motivation from your friends. Achieve your goals the fun way with Nike Run Club.

## Features

- Full support for Android Wear OS devices
- Track and save runs
- Global and personalised challenges
- Personalised training schedules
- Trophies and badges for your achievements
- Compete via ranks
- Encouragement from friends during your run
- Share your runs with everyone

# Runkeeper - Sport-app with gps

<https://apps.apple.com/nl/app/runkeeper-sport-app-met-gps/id300235330>



## Description

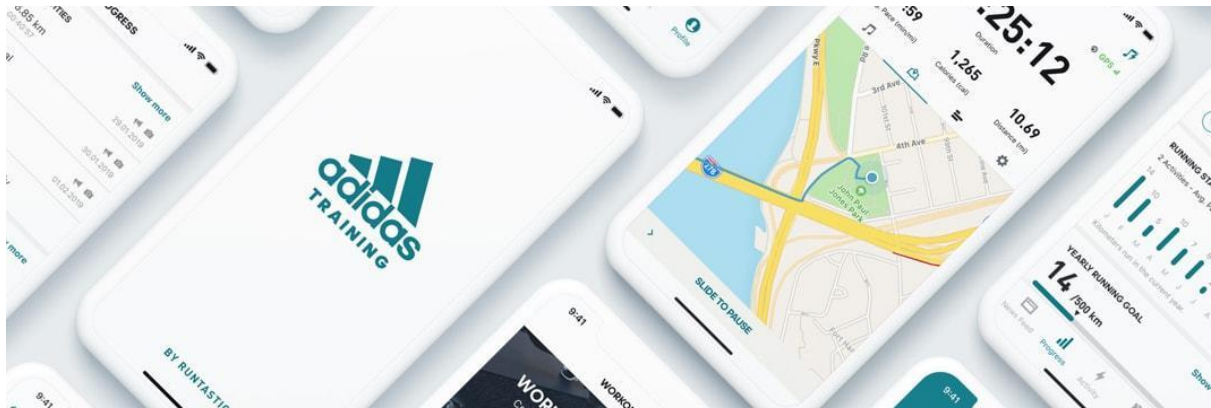
Reach your running goals with the ASICS Runkeeper™ app. Track your workouts, set measurable goals and see your progress along the way: whether you're just starting out, training for a race or trying to break a personal record, we'll help.

## Features

- **Track workouts:** record activities such as running, walking, biking, hiking and more manually or with GPS.
- **Set goals:** maybe you want to get faster, run farther or lose a little weight. Whatever your goal, we'll help you achieve it.
- **Listen to audio:** choose the stats you want to hear during your activity, such as pace, distance and time (available in five additional motivational voices in English), plus integration with Apple Music and Spotify
- **Follow a schedule:** routines lead to progress. Choose a personalized schedule that gets you going day after day.
- **Stay motivated:** participate in in-app challenges, receive rewards for your workouts, join virtual running groups and share accomplishments.
- **See progress:** This is what it's all about. We'll track your stats so you can see how you're progressing toward your running goals.

# Adidas Running App

<https://play.google.com/store/apps/details?id=com.runtastic.android&hl=nl&gl=US>



## Description

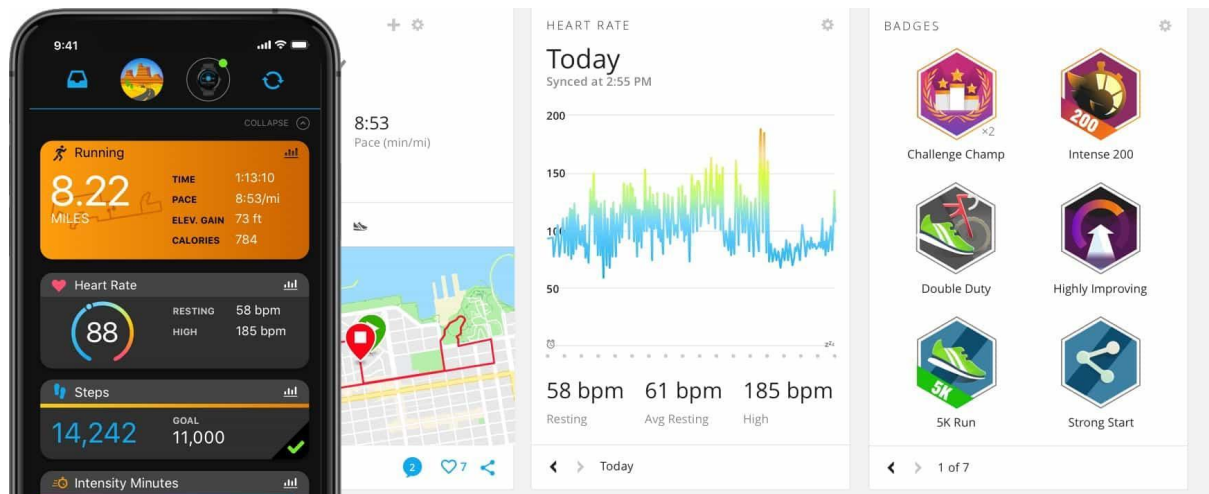
Join more than 170 million people using adidas Running. Reach your goals with our 5k, 10k and marathon training schedules. Get insight into duration, distance and calories burned from over 120 different activity types. We're much more than just a running tracker. Participate in Challenges and Virtual Competitions to keep you sharp and competitive. Create your own motivational fitness community by following other users.

## Features

- It's FREE!
- Our app has built-in GPS tracking - you'll find all your workout stats and progress in one place
- Get insight into duration, calories burned, heart rate data and more for over 120 activities such as yoga, cycling, walking and strength training
- Participate in virtual competitions to compete against others worldwide. Measure yourself against people from all over the world and earn badges!
- Keep track of your records for each activity
- Set goals: whether you focus on distance, endurance or weight loss, your personal goal is completely tailored to you. Choose a daily, weekly, monthly or yearly goal.
- Ready to push yourself? We'll keep you motivated with goal-based challenges

# Garmin Connect

<https://apps.apple.com/nl/app/garmin-connect/id583446403>



## Description

Garmin Connect™ is your central location for data about your health and fitness. Whether you're training for a big race or just counting your steps, you'll find the information and inspiration you need to perform better than last time.

Once you pair Garmin Connect™ with a compatible(1) Garmin device, activity tracking is just the beginning of what you can do. You can create new workouts, set up courses and even challenge your friends to a race with you, all from within the app.

## Features

- Displaying your health data for today in vivid detail on your personal My Day page.
- Analyze your activities and related statistics. (2)
- Creating custom workouts and courses.
- Synchronization with other apps, such as Apple Health, MyFitnessPal and Strava.
- Viewing personal records for steps, distance and pace.
- Earn badges for your results.
- View how you are doing compared to other Connect users using Insights.
- Gain support for Garmin devices and their features.

# Run The Music

<https://play.google.com/store/apps/details?id=air.com.KalromSystems.RunTheMusic&hl=nl&gl=US>



## Description

Run The Music is the only running app which actually adjusts the speed of your music by the pace of your run!

Suitable for any moving activity such as running, jogging and even walking or sprinting!  
Perfect for a stamina aerobic workout.

Apart of it being a really fun aerobic walking & running app with a new motivational factor to race against the music,

With Run The Music you can keep on running at your target speed just by listening to the tempo of your favorite endurance music.

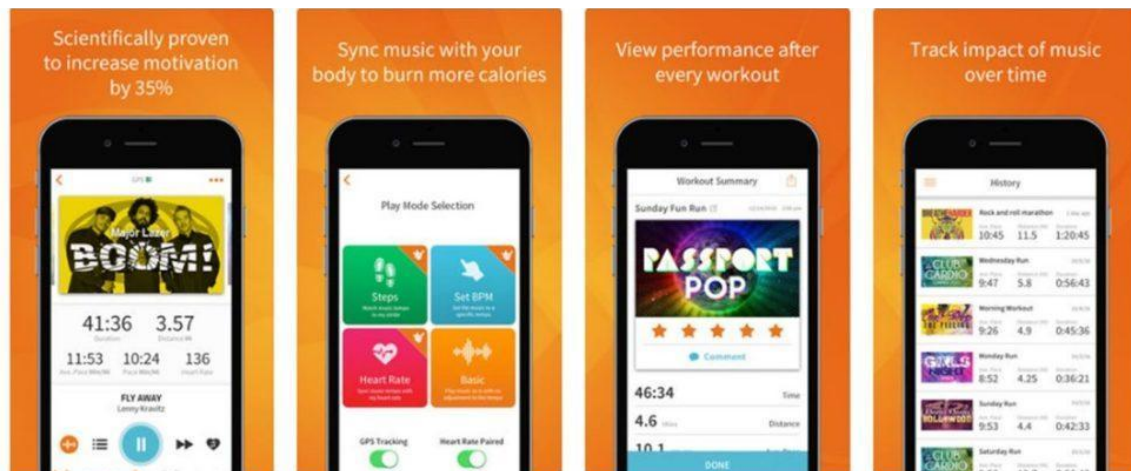
## Features

- Select your favorite song from your device.
- Set your 'target speed' e.g. : 9km/h
- GPS tracking
- When you're slower than 9km/h (in this example) your music will be played slower, however, try to go faster than your target speed and see how motivated you get :-)
- At first try to jog along instead of racing, to get that initial connection with your cardio song & gather your stamina.



# Rock My Run

<https://apps.apple.com/nl/app/rockmyrun-workout-music/id546417608>



## Description

RMR gives you the best workout music so you can consistently maintain your energy and tempo.

## Features

- **Adjustable BPM:** One-of-a-kind Body-Driven Music™ technology automatically adjusts music to sync with your steps or heart rate. You can also manually manipulate music to match your ideal BPM (beats per minute).
- **Dj-curated music:** Our professional DJ's curate running music to give you the best exercise experience for non-stop energy during your workout. (No more hitting skip!)
- **Run tracking:** Track your distance and pace while rocking out to the music you love, all in one app.
- **Backed by science:** RockMyRun has been tested by EPARC, a leading exercise research lab, comparing the motivation people feel listening to RockMyRun vs. standard workout playlists. The results were clear: RockMyRun is PROVEN to increase motivation and enjoyment by up to 35%. (details: <http://bit.ly/1yndAve>)
- **Tempo that builds:** Stations build in BPM during your workout to help keep you going with the perfect exercise music at the perfect moment.
- **Personalized suggestions:** Get station suggestions that are constantly updated based on your listening preferences.
- **Robust discovery options:** Discover new music based on activity, mood, BPM, length, and genre. We're proud to offer stations for Pop, Rock, Hip-hop, Rap, EDM, House, Dubstep, Drum & Bass, 70's, 80's, 90's, Oldies, Christian, R&B, Latin, Reggae, Seasonal, Country, Alternative, Classical, and more.
- **Not your Average workout music:** RockMyRun is different from Songza, Spotify and Pandora Radio because all songs are specially selected and seamlessly blended together, creating a unique workout music experience unavailable in standard music apps.
- **Not just for running:** Use it as a gym playlist for the elliptical or treadmill, during a 10k run, with Couch to 5k, or while engaging in marathon training, crossfit, bootcamp, cycling, and so much more!

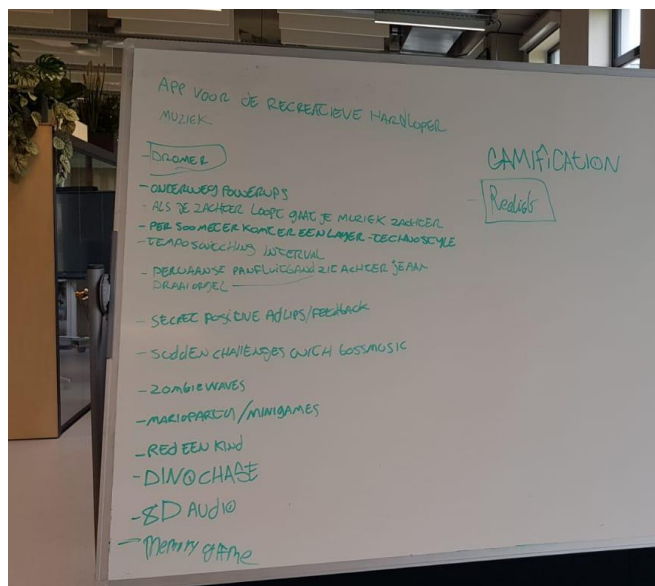


# Idea generation

## Rapid ideation

In this first stage of our app development, we are going to brainstorm some ideas using the rapid ideation method. This means each of us will generate as much as possible ideas and then we will criticize them.

- **Recommend a song based on your mood**
  - (+/-) Good idea but it might be too simple
- **Find Power-Ups on the way**
  - (-) Power-Ups don't have real life benefits.
- **Music reacts on your running speed**
  - (-) Only aiming for speed and not for health.
- **LayerBuilder where every ... meters ran you build another layer of music**
  - (-) Might be hard to do since none of us understands the separation of layers in music that well
- **TempoSwitching Intervals**
  - (-) Tempo Switching will be hard to implement using real life obstacles.
- **Pan Flute band chasing you**
  - (+/-) Good idea but it might be too simple
- **Secret Positive adlibs/feedback**
  - (-) Might scare users
- **Sudden Challenges with Boss Music**
  - (+/-) Good idea but it might be too hard and challenges will be hard to implement
- **Zombie Waves**
  - (-) Users will run faster and not be more controlled and healthy.
- **Mario Party/Mini Games**
  - (+/-) Good idea but it might be too hard to implement minigames and multiplayer mode
- **Dino Chase**
  - (+/-) Good idea but might get boring fast or will scare users.
- **Using 8D audio to create a experience**
  - (+/-) Good idea, unfortunately not enough time to discover the possibilities and use of 8D sound combined with making an application.
- **Memory Game**
  - (+) Good idea for training mind and body at the same time.



# Starbursting

In this stage we have chosen to stick with the Running Program Application. This application will give the user a running program combined with music that fits the tempo and goal of the program part.

## **Who is our target group?**

Our target group is based on fun runners, who run on the regular but not on the professional level. These people go out running with each their own reason.

Therefore the focus will be specified on creating an environment where every user has the opportunity to enjoy their running session.

## **What information would they want to see?**

Our target group wants to have the feeling of achieving goals, which can be losing weight, getting condition or even clearing the mind.

Therefore we will only supply positive-minded feedback towards the user. This will make them feel better about themselves, not depending on the performance of the user. This doesn't mean we won't give any feedback related to someone's performance. The feedback based on performance will come in data, like basic running stats, such as average speed, total distance of session and possibly how many calories were burned during the session.

## **When will be a good time to release it?**

It would be awesome to finish the project before the summer of 2021, because people can finally go out again and want to do activities outside. Also our deadline will be on 24 of June so that comes in perfect.

## **Where will be our application used?**

Our application will be used in the Netherlands at first. When the application has been finished and validated the next step would be to go international with the application.

## **Why would the users choose our application?**

The difference between the usual running application and our application is that the audio feedback is the most important in the application. The preset programs combined with your favorite music and running program will give the user structure and reduce stress which leads to the best session experience.

## **How are we going to implement it?**

We will read out the API setup by our PO. This data will be used to select the right music at each point of time. This combined with the reactive running program will guide the user through the running session, taking away the stress of having to make decisions in tempo, songs, and breaks.

# User Personas

**Name:** Krasen Angelov

**Age:** 23 years old

**Location:** Eindhoven, The Netherlands

**Language:** Bulgarian, English

**Family status:** Single child

**Stage of life:** final year art student at university

**Character:** Friendly, Social



**Motivations:** To release stress, or to reward himself for a few days of long study sessions, Krasen Angelov heads out to the nearest park, which hosts a couple of abandoned buildings and a skateboard playground.

**Goals:** He wants to change something in his training routine to make the experience more interesting.

**Frustrations:** His motivation to work and study for the university is at an all time low and he isn't really happy about it. The monotonous running at the same place over and over again doesn't help either but there aren't any other places around.

**Professional background:** Photography

**Name:** Luuk Joormann

**Age:** 20 years old

**Location:** Eindhoven, Netherlands

**Language:** Dutch, English

**Family status:** He has a little sister

**Stage of life:** Working, No university yet, Has a girlfriend

**Character:** Friendly, Hard-working, optimistic



**Motivations:** On the weekend Luuk Joormann really likes to take his car and drive around in order to search for some nice places to run. He is in it for the new tracks and hiking in the area.

**Goals:** He would like to discover new places in the area on his own to relieve himself from stress and the normal world.

**Frustrations:** It's always difficult for him to find a new track every now and then.

**Professional background:** Team leader of a pizza restaurant

# App Description

So how long has it been since you went out practising sport or just taking a walk or run? In the time we sat at home, our body got a lot less movement than before. As sport and movement has been hard to practise during the last year now it's more important than ever to get people to exercise.

Pace will guide you through your running session as a whole other form of experience. So will the application guide you through your session based on the selected program. Your favorite music will be played and switched up to achieve the optimal running session.

With the use of music and a running program the user will be led through the session, including breaks, sprints, warming up and warm down. Therefore the user doesn't have to stress about the program, and can totally focus on him/herself exercising.

The user will receive positive feedback, which is not dependent on the performance of the user.

Users will be able to have insights into their achievements, statistics and personal information. This will include average speed, total distance, time used, music favorites and program completion.

# User requirements

Requirement	Must have	Should have	Could have	Won't have
User can select own playlist	X			
User can select multiple programs		X		
User can view daily statistics	X			
User can view session statistics	X			
User can select difficulty		X		
User can log in into application			X	
User can like/dislike songs		X		
User has map insight of session			X	
User will be able to select a pre-planned route				X
User will be able to select terrain dependent running program				X

# Use Case 1

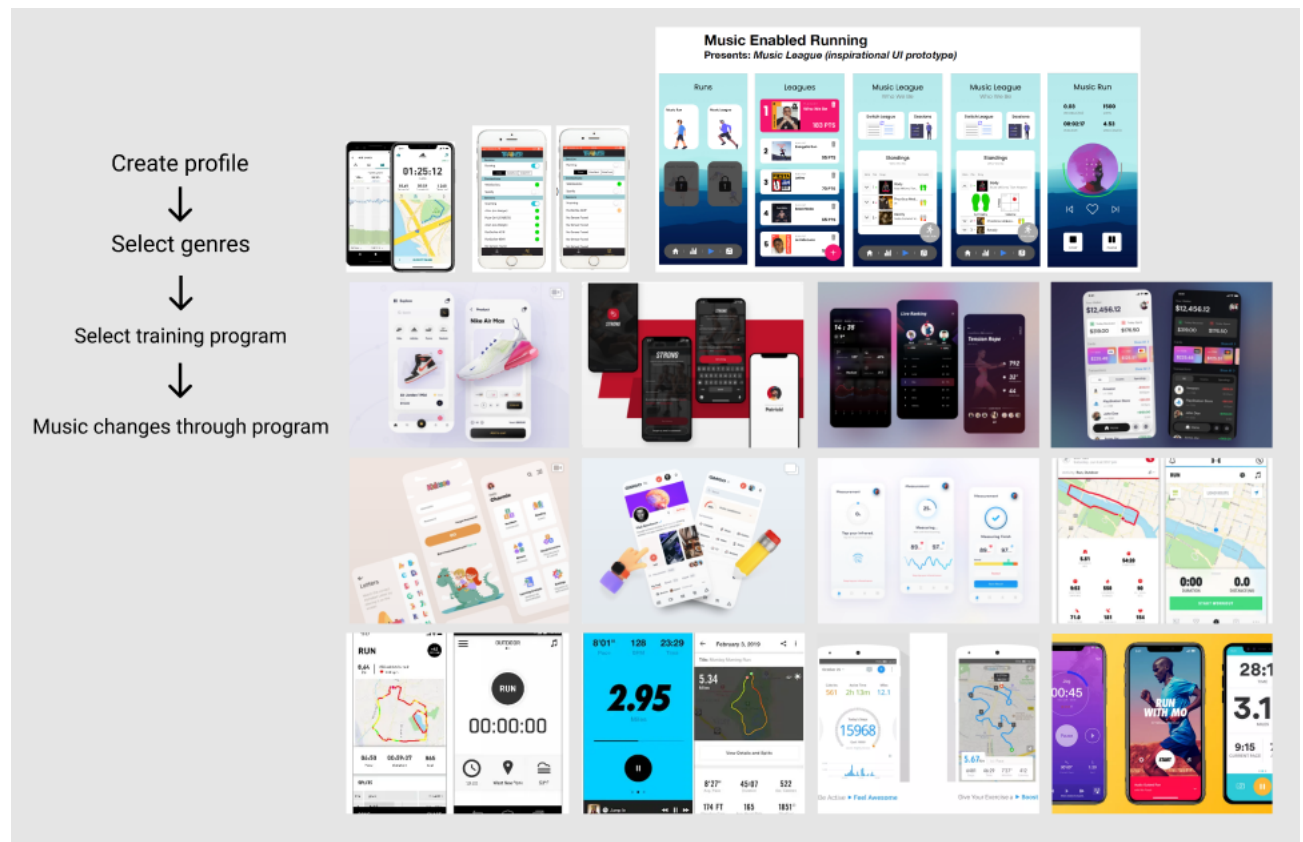
Use Case One	Going for a run to relax the mind
Actor	Female, 23 years old
<p>This female had a busy workday and after coming home and having dinner she feels very restless. She decides to go for a run around the block.</p> <p>She opens Pace to select a non-intensive running 35min program, with the fitting Chill playlist on Spotify.</p> <p>The music starts to play and the running program starts out with a 5 minute warm-up walk. Then the program switches to a 10 minute jog, a 5 min walk break, followed up by 10 more minutes of jogging. To finish the session there is a 5 minute warm down. She is home early 2 minutes and decides to finish the session and leave the statistics for another day. Her head is cleared.</p>	
Alternative Flow 1	She decides halfway to pause the session to have a 20 minute break on a park bench. Then she continues the session.
Alternative Flow 2	She decides to extend the session with another running program of 15 minutes because she wants to have a longer session.
Trigger	The application is flexible and easy to use with custom music.
Pre-Condition 1	Female has Spotify account
Pre-Condition 2	Female wants to use an application for managing running sessions.



## Use Case 2

Use Case Two	Going for a run to lose weight
Actor	Male, 37 years old
<p>The male has gained a lot of extra weight during the pandemic. As working at home for a whole year doesn't improve your body, not sporting at all can have drastic consequences. The male doesn't have a lot of knowledge about exercising or running at all. Therefore the male downloaded the Pace running application. He selected a mediocre running program with his own 80's Rock playlist, as he gets a lot of motivation from this music. He decides to take small steps so the first day he tries the 15 minute, non-intensive program which exists out of a 5 minute run, a 5 minute walk and a 5 minute run again. He completes the program at his own pace and is happy about the result. The next day he tries out the 20 minute program but decides to quit after 15 minutes.</p>	
Alternative Flow 1	The male decides to select a very intensive running program which turns out to be way too much for his body at the moment. He quits halfway and loses motivation
Alternative Flow 2	The male completes the 20 minute program and moves on with 5 minutes every 2 days and achieves his goal of losing 10KG in 2 months.
Trigger	The application gave him the opportunity to use his own playlist which will be used in the running program.
Pre-Condition 1	The male gets motivation from the application to continue.
Pre-Condition 2	The male has motivation of himself

## Inspiration for low fidelity prototype

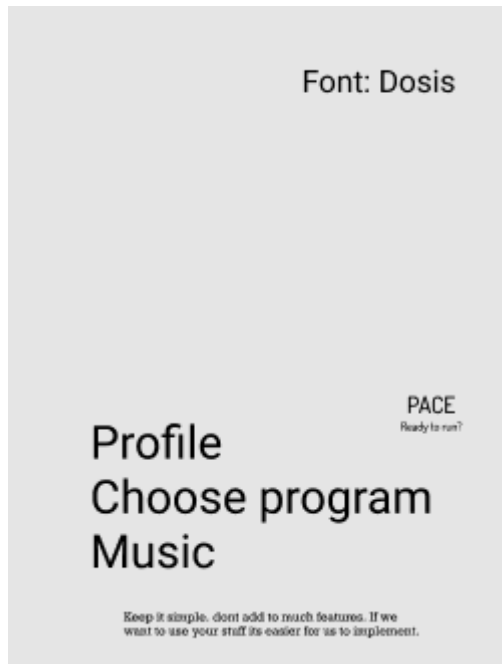


# Prototype

## First sketch

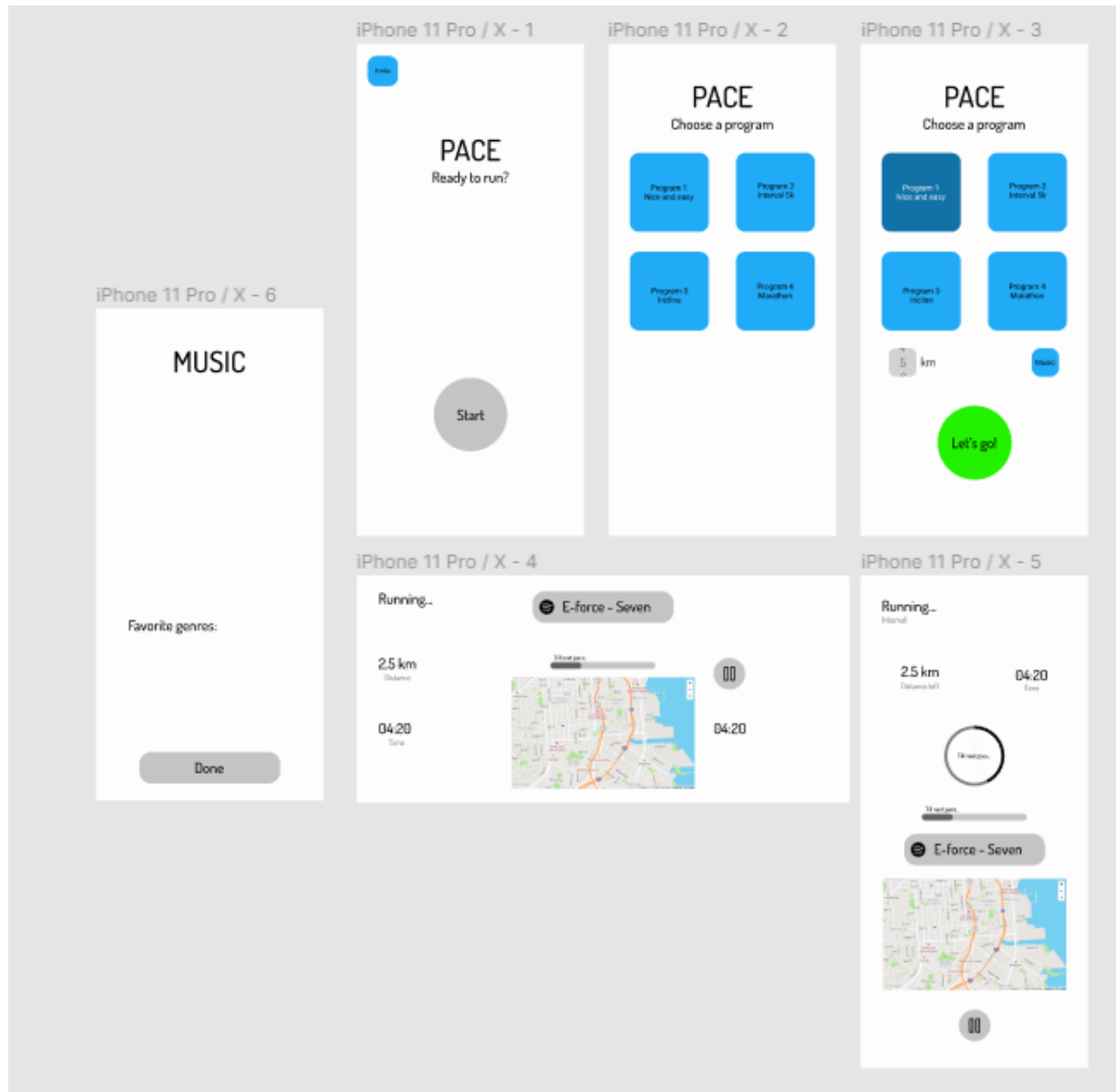


# Styleguide (font)



# Design

Initial design:



Improved design:

