



DEVELOPMENT TASK

Dear Candidate,

We feel very excited about having the opportunity to test your skills.

This document is going to brief you on our working environment as well as on what needs to be done for the test. During the assessment of your work, we will not only evaluate the ultimate result, but also your Git revision history, the comments you put there and, most importantly, the quality of code you provide. We encourage the use of object-oriented approach.

The task you see on the next pages is specified in a way that should let you use your own imagination and creativity. You should not feel constrained, we'd love to see your own thought in it.

If you have any questions at any stage of your work, please feel free to contact us – we will be happy to help.

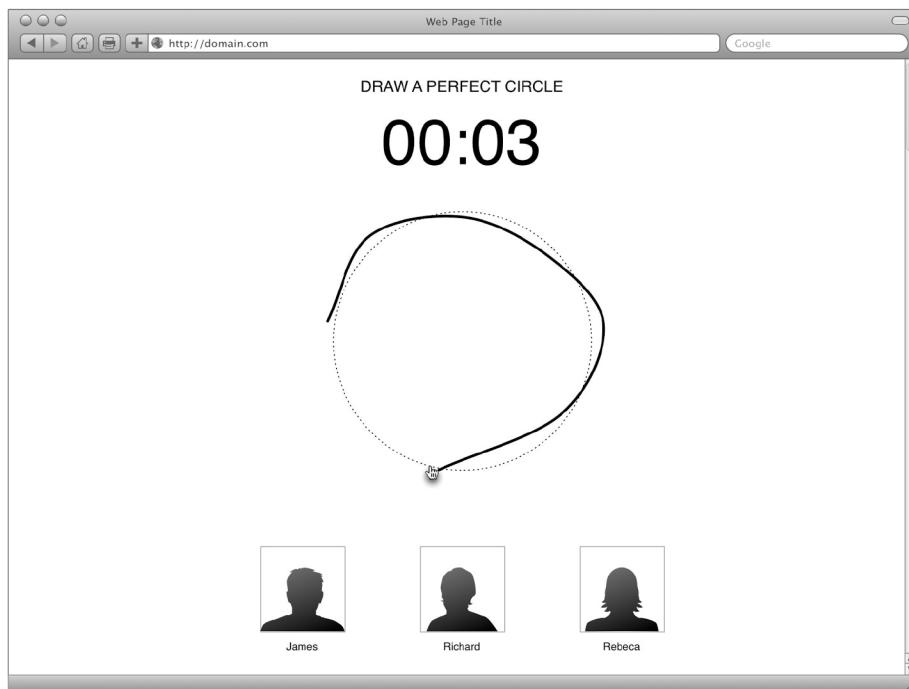
We wish you good luck,

Perfect Circle Game

The goal of this task is to develop a simple multiplayer game on Google App Engine where users need to draw a perfect circle.

The process is very simple:

1. Users visiting the page are asked to sign in with their Google accounts.
2. After logging in, they are added to a new game room that can host a maximum of 3 players.
3. As soon as third person joins, the room closes and the game begins. From that moment, all future players form a new game room.
4. The game starts counting down 5 seconds. This is the time in which the players have to draw a circle on the screen.
5. When time runs out, the server evaluates the circles and picks the most perfect one.
6. Users are notified about the results (first, second and third place).
7. Users can join a new game.



There are no set design guidelines for this task. This is just a visualisation of the idea.



Goals to be achieved

Please find a list of things that you should pay most attention to when working on this task:

- Google App Engine hosting setup
- Google login integration (App Engine users service)
- Displaying nicknames of connected players
- Automatic creation / closing of 3-person game rooms
- Push notifications for game results from the server to connected users
- Circle assessment done on the server side
- Protection against cheating (sending the same or pre-generated circle data)

Testing Environment

appspot.com provides free hosting environment for GAE webapps. If you should start running out of quota, contact us about the issue as soon as possible.

Please set up a private repository on [BitBucket](#), or other platform of your choice, and push your solution there. Make sure the codebase is accessible only to yourself and your points of contact. Tag the final solution as release-1.0.

ESTIMATED DELIVERY TIME

1-2 working days



GOOD LUCK!