



Mobile App on Number Puzzle

An iPhone / iPad App

Executive Summary

With a high propensity towards logical games, the client wanted to develop an iPhone/iPad game application for everyone which would be challenging & educational. At the same time there had to be enough done to make the experience filled with fun.

The game is a logical one based on number placement puzzle. The objective is to fill a 9×9 grid with numbers(1 to 9) so that each column, each row, and each of the nine 3×3 sub-grids that compose the grid (also called "boxes", "blocks", "regions", or "sub-squares") contains all of the numbers from 1 to 9. The puzzle setter provides a partially completed grid, which typically has a unique solution. The client was in search of a reliable and efficient software development partner to build the application.

After few quick discussions with Mindfire's technical team, the client could judge the capability of our unit and awarded the project to us. Mindfire took no time in understanding the objectives of the client and started work immediately. The end result developed was a game in iPhone/iPad that generated each and every time a unique puzzle. The client was very happy to have received a fully functional app in time without much of involvement with the developers during the development phase.



About our Client

Client | XYZ | **Location** US

Business Situation

The client's intent was to develop a fun puzzle game where users can test their logical and mental skills with time being a limiting factor. Another additional requirement was that there should be no database which would store the puzzle but the application always generates a unique puzzle with a great speed, which was a test for Mindfire's team as it was something really tough for this mobile platform. Because creating a unique puzzle each time it involved a huge calculation.



Solution Details

The Mindfire Solution

After carefully analyze the client requirement Mindfire Solution start its development. The app include the following main pages which were developed as client request.

- **Home Screen** -: Having three buttons as Play, High Score and Exit.
- **Level Screen** -: Having three buttons as Easy, Medium and Difficult.
- **Game Screen** -: Partial filled Grid
- **High Score Screen** -: Show the list of user who had completed the puzzle in less time .
- **Info Screen** -: Having three buttons as About, Help and Info.

Achievements

The main hurdle on this project is to how to generate a number which is not on the same row, column and sub grid. To develop this, our teams efficiently implemented the Backtracking algorithm, which generated a number which was unique for the same row, column and sub grid on a great speed.

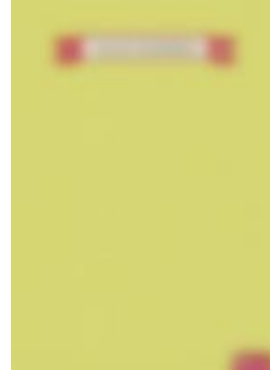
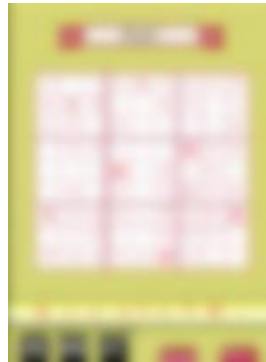
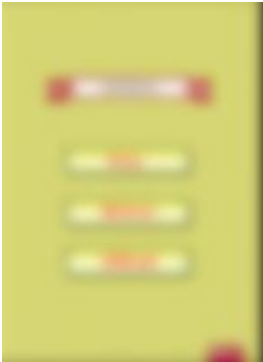
Technologies

iOS SDK 4.2, xCode 3.2.5



Final results

Software system



Customer benefits

By the introduction of this interesting game in the app market , customers have the opportunity to play a game which challenges their mental agility and increases it. It is also one of the better ways for a person to pass his/her leisure time effectively.

Future relationship

The client was pleased with Mindfire's effort in delivering the app on time. There has also been confirmation from their end to work with us in the future whenever there is an opportunity.