



Customer Success Story

Daffodil helps a UAE based gaming solutions company launch a unique Sharia compliant lottery application in the UAE



Customer: A leading online gaming company

Country: UAE

Industry: Gaming

Our Role: Product Engineering



About Client

The client is one of the leading gaming solutions companies in the UAE which strives to provide a legendary experience for players through engaging and innovative online games. The client leverages an extensive betting menu, providing users with a comprehensive statistics on live games and those scheduled for future dates. The client plays an active role in encouraging people to achieve their dreams through projects, including funding scholarships, disability and various cancer societies.

15,000+
lottery outlets

AED
35 Million+
lottery size

10,000+
registered players



"I am extremely happy to share that the demo and training session of approx. 400 people went ROCKING today! Thanks for your support and efforts put in for today's event! Thanks once again!"

Senior Project Manager

Problem

The client envisioned introducing a lottery gaming application in the UAE. However, according to Islamic Sharia values, muslims are not allowed to get indulged in gambling as it is considered a taboo in Islam. The client had invented a unique lottery system that was totally in compliance with the Sharia law and as well as to regulations of the Govt of UAE. According to the client's concept, rather than purchasing the lottery ticket directly, a user needs to purchase collectables from an online store or 15,000+ registered physical stores and users will receive points corresponding to a purchase. After achieving a minimum point limit, users are permitted to play the lottery. The client was also granted a patent for this unique lottery system. To build upon this advantage, the client was looking for a technology partner who could transform their promising vision into a market-fit product.

The requirement was to conceptualize the lottery system and transform it into a market-ready product via building user stories, wireframing, UI/UX development, implementing business logic, coding and QA. The need was to develop the lottery system as two integrated applications; an eCommerce based platform that allows participants to purchase products to earn tokens and a lottery application that enables them to play lottery by selecting numbers. The prerequisite was to provide a customizable backend and frontend, high scalability and fool-proof security.

Solution

The team started with an in-depth analysis of the business idea to help the client define a clear product vision and prioritise the scope. The initial challenge was to determine the ideal technology stack and architecture for both the applications. Upon analyzing the requirement and comparing several technology platforms that could support certain parameters, such as speed to market, customizable frontend & backend, scalability, security etc. Magento CMS was identified as the core technology for building the e-commerce application. The lottery management system was built using the 3-tier architecture considering the application's CPU consumption, deployment frequency, and easy rollback requirements. In order to make the application scalable and easily manageable Amazon Web Services modules such as S3 (for centralized storage), CloudFront (to reduce latency), Elastic Load Balancing (for fault tolerance), Aurora MySQL (database) for DBM were used to deploy the application.

Daffodil's UX experts applied design thinking techniques to build an interactive user experience and create a compelling, transparent user interface for both the applications. Two different web and mobile applications were developed with multiple modules for the admin to manage the lottery system. An eCommerce platform for users wherein they can purchase collectible items and earn tokens in return to play lotteries and secondly, a transnational lottery system that enables individuals from different geographical locations to play lottery by selecting six numbers. The system allows users to play lotteries and claim their prizes while making it easy for the admin to create and control the lottery system.

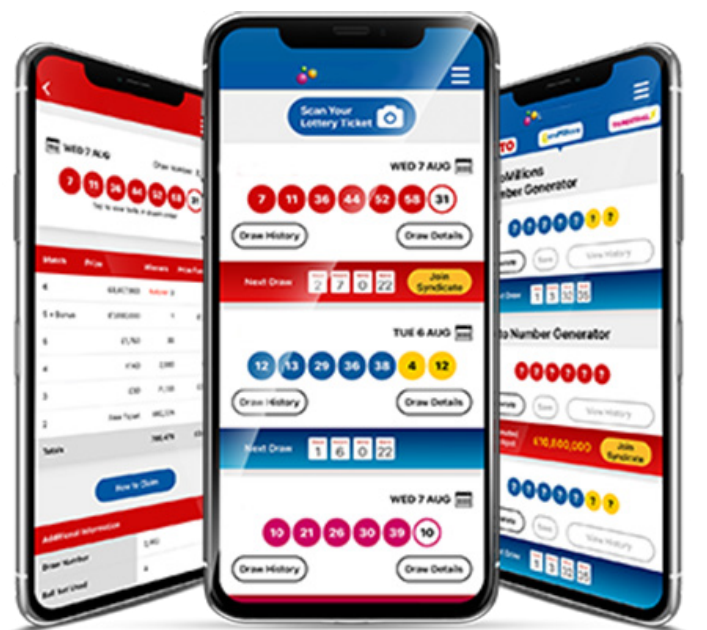


The lottery app allows users to play lotteries and claim their prizes while making it easy for the admin to create and control the lottery system. Prizes, lottery numbers and terms & conditions can be configured by the admin and can be changed from one lottery play to another. Different lottery banners can be provided on the application which can be accessed by the user and terms & conditions need to be accepted by an user in the web or mobile application prior to playing the lottery. A user profile is created and verified by means of valid ID proofs. The account details provided by the user for claiming prize money are stored securely in the database in an encrypted format to ensure security of critical information. Some of the key algorithms and modules built by team Daffodil were:

Scratch Code Management: The scratch code engine was required to generate millions of unique 16 digit numbers and integrate the numbers with users details and insurance MSD. Team daffodil created an algorithm that allows admin to generate 16 digit scratch codes that are used for creating scratch cards for retail stores. The admin can get approval from super admin and then activate/deactivate the scratch codes.

Token Management: The admin can create the tokens that are assigned to buyers on every purchase to play the lottery. They can be managed by date (valid from, expiry date), can be created in batch, and sent to super admin for approval.

Divisor Management: This module automates the process of assigning tokens to the buyers. It manages the number of tokens that can be assigned to buyers based on collectibles value. Team Daffodil defined the logical algorithm behind divisor management based on the number of tokens to be assigned to a buyer based on the purchase value





Add Lotto: The admin can add new lottos by defining parameters as minimum tokens required (to play lotto), end cut off date, add prize description (prize position, number of winners, prize type, etc.). Depending upon how lottos are managed by the admin, the buyers can win cash, physical prize, or tokens to play lotto again.

To enable the efficient testing process of multiple use cases and peak loads Daffodil's team of QA experts set up an automation testing infrastructure using Selenium. The application has been orchestrated to handle more than 50,000 concurrent users at a time. The concurrency can be stretched to 100,000 users within a matter of a few clicks. Along with the development, team Daffodil is also involved in 24/7 maintenance of the solution post-production. For any technical/functional error while using the app on web/mobile, a dedicated support team at Daffodil's end provides reliable support to the client.

Impact

Our technical leadership in defining project-level architecture, including design, infrastructure and data architecture, helped the client to launch a robust lottery system in the UAE market. The response to the application from across UAE has been extremely positive as the mobile application received more than 20,000 downloads within 8 days of launch and the web version accounted for more than 30,000 users. The client has been extremely satisfied by the way Daffodil has executed their vision and have planned for further updates to the application such as integrating multiple currencies and live streaming of the lottery draw.



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Technology Stack













- Magento 2
- HTML
- Knockout.js
- MySQL
- iOS/Swift
- Android/Kotlin

About Daffodil

Daffodil Software is a software engineering partner to 100+ organizations across the globe and has been helping them in making their software products more robust, teams more productive and processes more efficient. Our ability to look beyond technologies to deliver innovative solutions with scale and speed has been lauded by our clients as well as the tech community worldwide.

Since our inception, we have invested in organic growth; building on our engineering capabilities, organizational processes, and culture required to deliver a truly collaborative ecosystem for solving technology challenges. At the core of Daffodil lies a culture rooted in innovation, learning and a result-oriented mindset.

GRANDVILLE, USA

2885, Sanford Ave SW
#28585, Grandville,
MI 49418 USA

GURGAON, INDIA

9th Floor, Tower B1,
DLF SEZ Silokhera,
Sector 30, Gurgaon
122001

DUBAI, UAE

Suite No.: 407- 412,
Clover Bay Tower,
Business Bay, Dubai
United Arab Emirates

HISAR, INDIA

6th Floor, Metropolis Mall,
Industrial Area, Hisar,
Haryana - 125005



✉ info@daffodilsw.com

🌐 www.daffodilsw.com