

AGN Service and Driving Range Operation Management System

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Abstract : AGN (Akademi Golf Nasional) Services and Driving Range Operation Management System is a web-based system that developed to provide a platform to fulfil the needs from different type of users who involved in golf industries or activities. The existing system of AGN service are lacking its own registration and management features for admin and users to manage general affairs related to golf activities. The objective is to develop the system is to identify requirement, design, develop and test the system in terms of functionalities. To achieve project, throw-away prototyping development methodology was applied to develop a web-based system to complete and achieve client requirements. The expected result of project is to ensure the web-based system can be completed with minimalistic interface designs with responsive functionalities.

Keywords: AGN service, Golf, Web-based system

1. Introduction

Golf is a unique outdoor sport balls game. Individual or team players use golf clubs to hit a small ball into the hole, and the player who uses the fewest strokes score wins. Most games have nine or eighteen holes. The stadium is composed of tee, fairway, green, long grass, bunkers, pools, and other obstacles. A golf course is a place required for golf sport games to be able to take part. A standard golf course includes 18 holes. The standard score is 72. The stadium is composed of tee, fairway, green, long grass, bunkers, pools, and other obstacles [1]. Golf, a cross-country game in which a player strikes a small ball with various clubs from a series of starting points (teeing grounds) into a series of holes on a course [2]. AGN Service and Driving Range Operation Management System was introduced to provide reservation web-based platform to support administrative and customers activities in specific areas or fields especially related to reservation of golf activities and programs in Universiti Utara Malaysia (UUM) [3]. The existing AGN services website only allow customer to make reservation through registration form, google form by scanning the QR code when users intend to participate in golf activities.

The existing web-based system of AGN services is very static and straight away website that contain images, brochures of golf package information, pricing, QR code that navigate to google form. The existing web-based system from AGN did not provided its own functional features. The current existing web-based system are inconsistent, ineffective, and inappropriate service platform. Users of the AGN services website are unable to register an account on the platform. There are different way of registration process provided by AGN service and did not have a independent platform to register which it will lead to customer confusion, At the same time, the AGN administrator of registration may distract its attention by looking different type of registration that have done by users or participants. The registration process is all in the manual way. The circumstance of current management may lead to certain mistake action and the processing time of registration are inefficient and wasting of time on processing participants requests.

The administration who are responsible of registration in AGN services must reply manually to participants by emails or phone contact numbers which decrease efficiency in registration process. Therefore, AGN Service and Driving Range Operation Management System to overcome ineffective process. The AGN services provider needs to improve their online reservation system to sustain the advantages of convenience, success of the activity programs and increase customer satisfaction [4]. This proposed web-based system helps the golf participants and AGN staff as the admin to manage the reservation from the customer, view the daily and monthly sales statistic records and add or delete the services. The participants can make reservation and able to choose different payment option to pay their reservation and can ask for refund if the reservation had cancelled by themselves.

2. Materials and Methods

2.1 Materials

The web-based system was using Microsoft web development software tools as a front-end and back-end tools for development purposes. The front-end and back-end tools included:

- a) Front-end
 - I. ASP.NET Framework 4.5
 - II. CSS
 - III. JavaScript
 - IV. Bootstrap

- b) Back-end
 - I. C# programming
 - II. MS SQL

To align with customer requirements software development framework which is .NET Framework 4.5. This web-based system was under developed by using .NET Framework for better integratio. MS SQL was chosen with the purposes of aligning with .NET Framework. CSS and Bootstrap was used to improve the interface of the web designs. Javascript was used to support mirror operation of the web-based system while C# programming languages was used to cover the entire web algorithms with aligning with ASP.NET. For the testing field evaluation, a questionnaire has been created for evaluate AGN Service and Driving Range Operation Management System (AGNSD). Simple random sampling method is used for the study to select the respondents [5]. The questionnaire included 35 questions and the questions had been divided to 6 sections which include:

1. SECTION A: Demographic and Background Information
2. SECTION B – Part 1: Evaluating “AGN Service and Driving Range Operation Management System (AGNSD)”
3. SECTION B -- Part 2: Usefulness of AGNSD
4. SECTION B – Part 3: Ease of Use of AGNSD

5. SECTION B – Part 4: Satisfaction of AGNSD
6. SECTION B – Part 5: Security of AGNSD

2.2 Methods

Throw away prototyping (**Figure 1**) was applied in the project methodology to develop the system [6]. There are main 4 phases under methodology which are planning, analysis, design, and implementation.

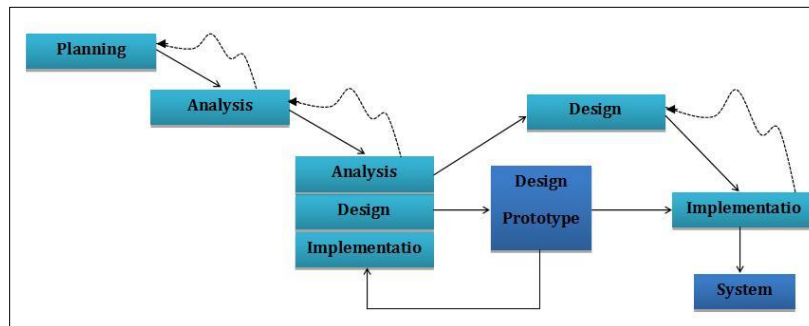


Figure 1. Throw away prototyping

3. Results and Discussion

3.1 Results

AGN Service and Driving Range Operation Management System (AGNSD) was successfully deployed to the public website. Users can visit the website and make reservation of golf activities and programs services provided by AGN (Akademi Golf Nasional) on service register page as shown in **Figure 2**.

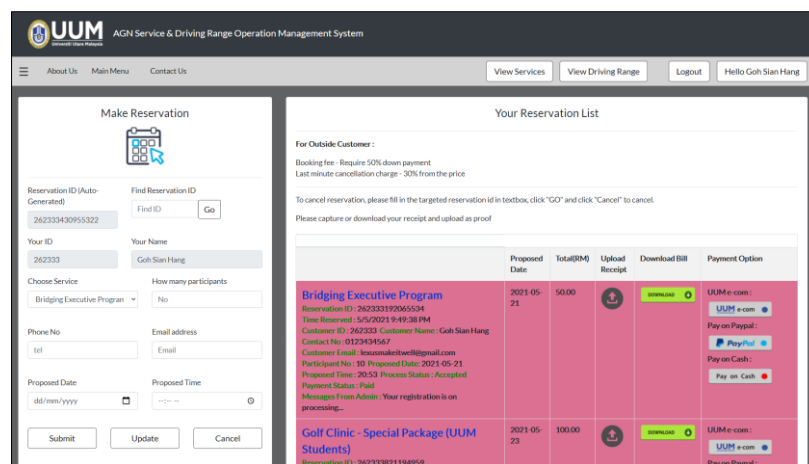


Figure 2. AGN Services Reservation Page

3.2 Discussions

Based on the results from the evaluation study, AGN Service and Driving Range Operation Management System (AGNSD) overall performance is satisfactory and has shown the obvious effectiveness in terms of making and managing golf reservation. The system has achieved the primary purpose with well development.

3.3 Figures

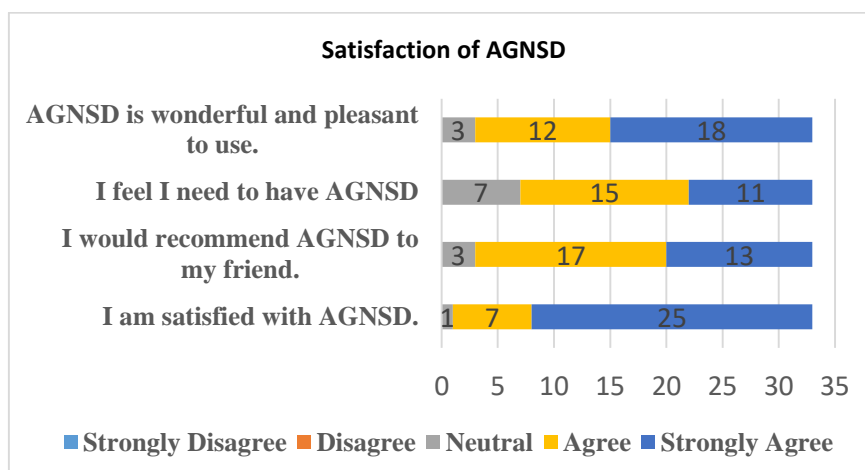


Figure 3: Satisfaction of AGNSD

In **Figure 3**, there are 25 respondents (75.8%) strongly agreed and 7 respondents (21.2%) agreed that they are satisfied with AGNSD. However, there is only 1 respondent (3%) was neutral with this statement. Next, there are 17 respondents (51.5%) agreed and 15 respondents (39.4%) agreed that they would recommend AGNSD to their friend. However, there is only 3 respondents (9.1%) was neutral with this statement. After that, there are 15 respondents (45.5%) agreed and 11 respondents (33.3%) strongly agreed that they feel they need to have AGNSD. However, there is only 7 respondents (21.2%) was neutral with this statement. Lastly, there are 18 respondents (54.5%) strongly agreed and 12 respondents (36.4%) agreed that AGNSD is wonderful and pleasant to use. However, there is only 3 respondents (9.1%) was neutral with this statement.

4. Conclusion

In this project, a web-based reservation system was developed to eliminate the existing problem on the ineffective manual reservation process. The system has achieved the primary purpose with well development and successfully deployed. However, there could be a slightly improvement in the function to achieve better satisfaction and high agreement on the perceived usefulness.

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