
Design a Complete Website for the Sustainable Development Goals (SDG) in Iraq

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ARTICLE INFO

Article History:

Received: 20 March 2017

Accepted: 1 April 2017

Published: 10 April 2017

DOI:

10.25212/lfu.qzj.2.2.17

Keywords: : *MDGs (Minimum Development Goals) Indicators, SDGs (Sustainable Development Goals), Web development, Web Design.*

ABSTRACT

17 goals and 169 targets have been announced by the United Nations at the summit held in September 2015 to achieve comprehensive development in all social, economic and environmental aspects to improve life. However, the achievement of these goals requires a change in mentality and culture of design development strategies where information plays a key role in its success if it has been delivered to communities effectively. Websites have active role in providing information for different people free of charge. The research aims to improve the current developed condition of Iraq through publishing the cultural awareness of sustainable development and its goals among people via the new technology tools, as well as helping professionals in the field of sustainable development in identifying problems and finding proper solutions. The problem of research is educating the community to actively participate in achieving the goals of sustainable development, especially after the significant decline experienced by Iraq in achieving the MDG after 2014. The first website is designed for the purpose of SDGs. This website is designed to publish the SDGs and their targets as well as the statistics that relate to them. Different programming languages have been used in designing this website such as PHP, HTML, CSS, JavaScript, JQuery, AJAX and MySQL.

1. INTRODUCTION

Brought about scientific developments, technique, revolution era of information and communication, a lot of achievements that has gotten the attention of observers, At the same time neglected humanitarian survival chances, newest industrial progress lot of problems, Concerning nature, Increased rates of extinction of living organisms, as ozone layer depletion And the contamination of water and air.[1]

As a result of the great success of the Millennium Development Goals in 2002, for the advancement by the world and the protection of human rights in the present and the future, without affecting to the environment and the depletion of its resources, Goals came in (2030) to reinforce those successes and complements it. [2].

Iraq as other countries works to satisfy targets of these goals through educating the community to actively participate in achieving the goals of sustainable development, especially after the significant decline experienced by Iraq in achieving the MDG after 2014 as a result of carrying the burden of the government to achieve those goals without the participation of community. [3]

Website is one of the most common tools to disseminate information, thus this website is designed to publish the SDGs and their targets as well as the statistics that relate to them. Different programming languages have been used in designing this website such as PHP, HTML, CSS, JavaScript, JQuery, AJAX and MySQL.

2. MILLENNIUM DEVELOPMENT GOALS INDICATORS IN IRAQ

In year 2000, the UN approved eight Millennium development Goals with the view of addressing the most problems that are begging to be addressed of the time, below are the most important issues within the goals achieved by The Government of Iraq towards the Millennium Development Goals: [4]

- First goal: The eradication of poverty and hunger:

Iraq was able to achieve a reduction in the poverty rate from 23% to 19%, although it was aspired to reach 15% by the end of 2015 due to the economic prosperity during 2014. but the wave of displacement due to "ISIS crimes", and the drop in oil prices which have negatively affected the economic situation rising poverty rate to reach 22.5%.

- The second and third goal: To ensure primary education for children (male and female):

The elementary school net enrolment rate has come to 94.7% in 2015, up from 87.3% in 2000

- The Fourth, fifth and sixth goals: crises and health status:

The number of deaths of children under five has pointed to 17.4% in 2014

- Seventh goal: ensuring the availability of environmental sustainability:

In 2014, 89.3% of the Iraqi population is utilizing an improved drinking water source.

- Eighth goal: Creating a global partnership for development:

Internet using has increased from 5.9 % of the total population in 2014 to 15.9 % in 2015. [5]

3. WEB DEVELOPMENT

"Web development" usually refers to the main non design aspects of building websites: writing mark-up and coding. In small organizations may only require a single developer, while in large organizations and businesses, web development teams consist of hundreds of people (web developers). There are three kinds of web developer specialization; Front End Developer, Back End Developer, and Full Stack Developer. [6]

3.1. Front End Development:

It's also known as client –side development which is referring to all operations that are performed in client side. Front end developers are responsible for a website's user facing code and the architecture of its user activities. The main languages used at this side are HTML, CSS and JavaScript numerals. [7]

3.2.Back End Development:

It's also called server- side which refers to all operations that done at server side. The back end of a website consists of a server, an application, and a database which responsible of make front end possible. The languages used at that side are PHP, ASP.net and MySQL. [8]

4. DESIGN AND IMPLEMENTATION

This website has been designed to help citizens to know the concept of sustainable development and Specialists in sustainable development to share information about SDG with others.

The languages that have been used in designing this website are PHP, HTML, CSS, JavaScript, JQuery, AJAX and MySQL. To design any simple static website there is a need to use HTML&CSS while building dynamic website by using JavaScript to add interactive effects in page, MySQL to store data and PHP to retrieve data from database. In this site jquery and AJAX are used to get good performance because they use less number of codes in programming that decrease time of processing as well as updating only a section of a page not all.

4.1.WEB DESIGN:

It's what representation to a client and within seconds they will decide, rightly or wrongly if you have what they need. Web designing is subset of web development

4.1.1.DATABASE AND TABLES

This website has five tables in MySQL database to store data as illustrated in fig.1 and fig.2.

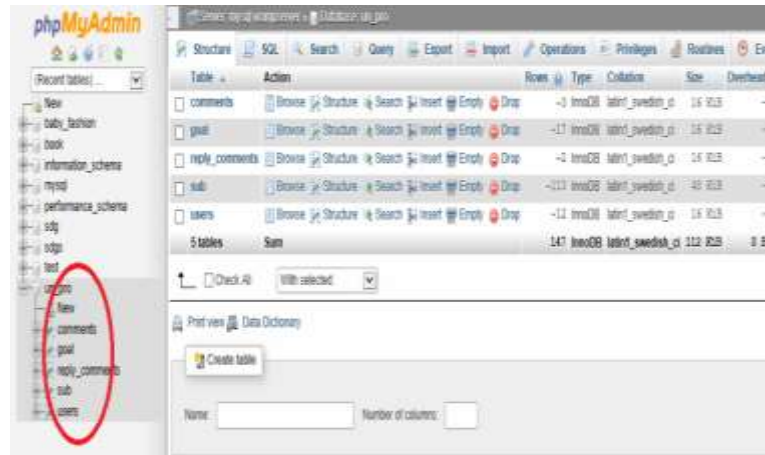


Fig.1. Database tables

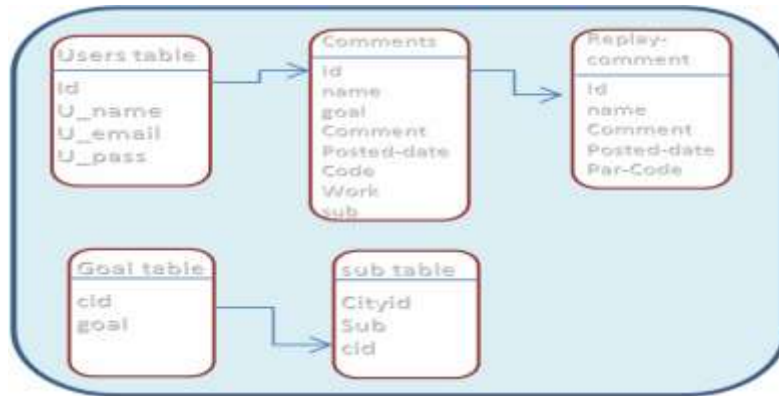


Fig.2. Table's structure

4.1.2. WEBSITE STRUCTURE:

The information and data gathering process include collecting all the required information about the SDGs, writing the required needs and preparing all the necessary resources to build the website.

The information architecture used to describe the planning of a website's structure. There are two types of navigation structures wide and deep. In wide navigation, the main pages are all visible together and for small sites, and deep navigation simplifies the main navigation and groups related pages into categories, which selected for this website, because it is the optimal solution for large websites as shown in Fig. 3.

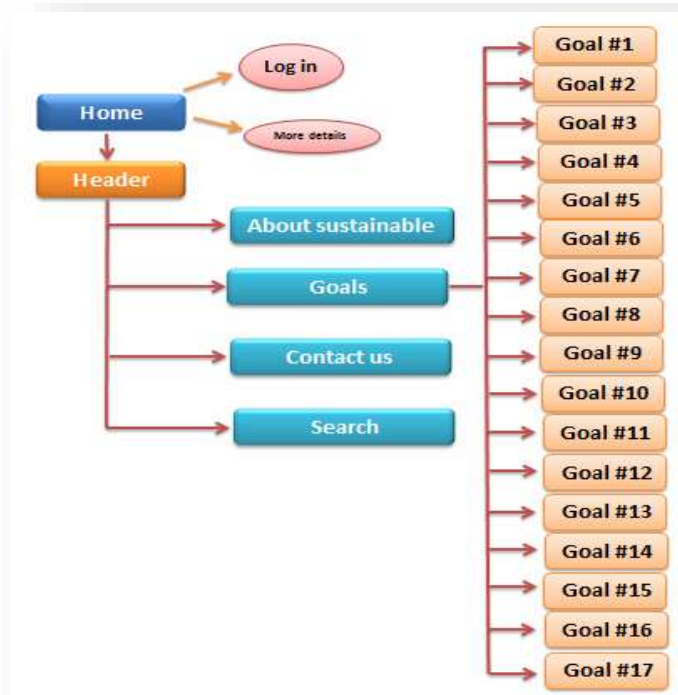


Fig.3. website structure

4.2. IMPLIMENTATION

The main interface of the website is designed by using HTML & CSS codes. The interface includes many pages that show information and images about SDGs. All components of this interface are explained below:

- Header: Designed by “Photoshop CC” and consists of the IIPS (Informatics Institute for Postgraduate Studies) logo.
- Navigation Menu: Consist of links to the pages: Home, SDG goals'(each goal has separate page), Sustainable Development Concepts, Contact Us and Search engine. As shown in fig.4 and fig.5.



Fig.4. Navigation Menu



Fig.5 SDGs Link

➤ Page Content: It differs according to the page information. The most pages consist of texts and images such as Home, SDG concepts and Read more pages. While other pages like SDG pages consist of:

- Name of goal and image related to that goal in its page as shown in fig.6.



Fig.6 Page of SDG6

- Statistical, Targets, Indicators of each goal which is designed as a tab within the page. It is scripted by JavaScript to exploit small space to write a lot of information.
- Each page of SDGs contains either text or input information of visitors that are stored in a database. The database contains tables with the data of targets of each goal, user information (name, email, and workplace), comments and replay to comment as shown in fig.7.



Fig.7 Page of SDG9

News Slideshow: It's a set of images of news animated on same position each of which has a brief text linked to its full story page. The slideshow is coded by JavaScript, set the animation time to 5 seconds and animation type to "fade".

➤ Contact Form: User can send a message to the email account of the website admin by this contact form. It contains 3 input fields (name, email address and message). The form is coded by PHP used mail function to send message and used validation method in case the user inserts wrong format of the input field. After clicking on the send button an alert message will appear showing "message sent successfully" message as shown in Fig.8.



Fig.8 Contact Form

- Footer: It is the last part of the website, consists of Links to the related websites such as: Iraqi Economists net, Iraqi Central Statistical Organization UNSECO, UNITED NATIONS, and the copyright.

5. CONCLUSION

- To achieve the goals of sustainable development, there must be political will and participation of the fact of all categories of community
- In this project, website for SDGs was created as a first site in Iraq that illustrates the concept of SDG (targets and indicators) to spread cultural awareness of the importance of sustainable development and its goals, it also works to help the specialists in the field of sustainable development and those affected in to identifying problems and finding solutions through displaying the statistical information data and users comments.
- In this site: PHP, Jquery, and Ajax languages are used to get more performance for page in loading. PHP is free fed, Jquery means less number of JavaScript code. Ajax used when you have database request, can reload only part of page not all.

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