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ICT373 – Software Architectures

Assignment 1 - Question 1

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# Description of Problem

Use JavaScript and HTML to write a web page which collects the user’s first name, family name/surname, email address, date of birth, and favourite sport (Athletics, Basketball, Cricket, Football, Hockey, Swimming or Tennis only) and sends them off to a server. Make some reasonable assumptions about the content and format of these data and enforce the assumptions from within your page. The address of the test CGI destination is http://www.it.murdoch.edu.au/cgi-bin/reply1.pl.

# Description of Solution

When the user clicks the Submit button at the bottom of the form the JavaScript function “CheckForm()” is called.

The solution for the “CheckForm()” section of the code is as follows:

If first name is empty string

Alert user

Return false

If surname is empty string

Alert user

Return false

If email is empty string

Alert user

Return false

If date of birth is not a number

Alert user

Return false

If date of birth is before todays date

Alert user

Return false

If the program makes it this far return true

The fuction checks the value for each input is valid. If any are invalid, the function alerts the user of the appropriate input to change, and returns false, ensuring the form is not sumbitted. If all the inputs are valid, the function returns true and the form is submitted.

The validation for the format of the email address and date of birth are done through the email and date types of the inputs in the form. The email type ensures that the email input follows the “\*@\*” structure, eg bill@home.com. The date type ensures that the date input is a valid date by using a date selector and ensures that a year, month and day are chosen.

The drop is not able to give an invalid value as it is not possible to select a nil value for the sport, due to the way the select input works.

# Testing

Assumptions:

* Names and emails address can be just numbers or begin with numbers
* Email address must contain text/numbers on either side of an @ symbol
* Date of birth can not be within 8 years of the current date. User must be at least 8 years old

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Expected Outcome** | **Actual Outcome** | **Proof** |
| Empty First name field | Alert “Enter a first name.” | Alert “Enter a first name.” |  |
| Empty Surname field | Alert “Enter a surname.” | Alert “Enter a surname.” |  |
| Empty Email field | Alert “Enter an email.” | Alert “Enter an email.” |  |
| Empty Date of birth field | Alert “Enter a valid date of birth.” | Alert “Enter a valid date of birth.” |  |
| Date input: date with last 8 years, eg “13/04/2015 | Alert “You must be at least 8 years old to sumbit. Please enter a valid date of birth.” | Alert “You must be at least 8 years old to sumbit. Please enter a valid date of birth.” |  |
| All input:   |  |  | | --- | --- | | **Input** | **Value** | | First name | Bill | | Surname | Hoppins | | Email | [bill@hoppins.com](mailto:bill@hoppins.com) | | DOB | 13/04/2009 | | Favourite Sport | Athletics | | All data is valid, will send to cgi-bin | Sends to cgi-bin |  |
| Email: “a@” or “@a” or “a” | Does not conform to email input type restrictions.  Error will show | Error generated by input box shown |  |
| Date: partially entered date eg: 17/mm/1991 | Does not conform to date input type restrictions.  Error will show | Error generated by input shown |  |

# Source Code Listing

**Q1.html**

<!DOCTYPE HTML PUBLIC “EG”>

<html>

<head>

<title>Assignment 1 - Question 1</title>

<script>

function checkForm()

{

var fname=document.getElementById("fname").value;

var sname=document.getElementById("sname").value;

var email=document.getElementById("email").value;

var dob=new Date(document.getElementById("dob").value);

var now=new Date();

var today=new Date(now.getFullYear()-8,now.getMonth(),now.getDate()+1,0,0,0,0);

if(!fname.trim())

{

alert("Enter a first name.");

return false;

}

if(!sname.trim())

{

alert("Enter a surname.");

return false;

}

if(!email.trim())

{

alert("Enter an email.");

return false;

}

if(isNaN(dob))

{

alert("Enter a valid date of birth.");

return false;

}

if(dob.getTime()>today.getTime())

{

alert("You must be at least 8 years old to sumbit. Please enter a valid date of birth.");

return false;

}

return true;

}

</script>

</head>

<body>

<h1>Assignment 1 - Question 1</h1>

<form method="GET" action="http://www.it.murdoch.edu.au/cgi-bin/reply.pl" onSubmit="return checkForm()">

First name: <input type="text" id="fname" name="fname"></br>

Surname: <input type="text" id="sname" name="sname"></br>

Email: <input type="email" id="email" name="email"></br>

DOB: <input type="date" id="dob" name="dob"></br>

Favourite Sport:

<select name="sport">

<option value="Athletics">Athletics</option>

<option value="Basketball">Basketball</option>

<option value="Cricket">Cricket</option>

<option value="Football">Football</option>

<option value="Hockey">Hockey</option>

<option value="Swimming">Swimming</option>

<option value="Tennis">Tennis</option>

</select></br></br>

<input type="submit" value="Submit">

</form>

</body>

</html>