

Unit :- Introduction To ASP. NET

- ⇒ Response. Write ("hello");
- ⇒ one page to another page
Redirect ("default.to.aspx");
- ⇒ the .NET Framework to develop And design by micro - soft And the first data version release in 2000 it is use to develop application for web , window , phone provide broad of a range.

* Questions & Assignment :- ASP.NET :-

- ⇒ 1) ASP And ASP.NET Difference
- 2) Difference Between server side And client side
- 3) .Net Framework
- 4) Session And cookies
- 5) Integrated development Environment (IDE)

* information print :-

- ⇒ Response. Write ("hello");
- ⇒ one page to another page redirect :-
Response.Redirect ("default.to.aspx");

Syntax :- Request.QueryString["variable"];
Count

* example :-

```
    Default2.aspx?id=101 : file
⇒ Response.write("Request.Query String (id)");
    : ("101") file. address =
```

* Query String :- addition of some data =
: ("Xpath of file") foribes

⇒ The Query String collection is use to
retry the variable value in the file =
HTTPQuery.QueryString - name id reisach

⇒ The HTTPQuery String is specify with
by the value in following code (id); if
button submit pressed, browser, data

* For example :-

```
⇒ [hr] ["Default.aspx?id=101"] ;
```

* ASP.NET Session :- file TEN.90A.htm 90B.GIF =
file browser 90C.19V193 required information (P)

⇒ ASP.NET session state that is use to
store And retry value of user. file SE

(S) session["id"] = 101; web bestress (S)
Response.Redirect("Default2.aspx");

: ("101") file. address =
: ("Xpath of file") foribes. address =
: ("Address") print page. address = entry

: ("Address") print page. address = entry
from : ("Xpath")

Difference Between Query String And Session

Query String	Session
1.) query string is client side state management technique.	1.) Session is server side state management Technique.
2.) query string data is pages specific can be access in that page only.	2.) Session data can be access throw out the session.
3.) query string data is visible to user and can be seen to user in browser URL.	3.) Session data is not visible to user.
4.) Data is not secured And can be altered hence insensitive data is stored in query string.	4.) Data is Secured hence sensitive data such as user information is stored.
5.) query string is constraint of maximum length.	5.) Session does not have such constraint.

ASP .NET Web Form Features

⇒ ASP .NET is full of features and providers. And a Some platform to create and develop web application.

- 1.) Server Control
- 2.) Master Page
- 3.) Working with Data
- 4.) Membership
- 5.) Client Scripting And Client Framework
- 6.) Routing
- 7.) State Management
- 8.) Security
- 9.) Performance
- 10.) Error Handling

Server Controls:-

⇒ Web Form Providers Which set of Server Controls. These controls are objects that runs when the page is requested and renders markup to the browser.

⇒ Some Web Server Controls are similar to familiar HTML elements, such as buttons and text boxes.

⇒ It also provides controls that we can use to connect to data sources and display data.

(2.)master pagestandard error TM.92A19/05/2018 10:05 9/20 front 2018

⇒ This page defines the look and feel and standard behavior that we want for all the pages in our application.

⇒ When users request the content pages, they merge it with master page to produce output that combines the layout of the master page with the content from the content page.

(3.)Working for data :-

⇒ In an ASP.NET Web Forms application, we use data-bound controls to automate the presentation of input of data in web page UI elements such as tables and text boxes and drop-down lists.

(4.)Debugging And Error Handling

⇒ We can diagnose problems that occur in our Web Forms application.

⇒ Debugging and Error handling are well supported within ASP.NET Web Forms so that your applications compile and run effectively.

(5.)State management :-

⇒ ASP.NET Web Forms includes several options that help you preserve data on both a page-per-page basis and from application-wide basis.

(6.) Routing :-

⇒ We can configure URL Routing of our application. And request URL isn't simply the URL the user enters into their browser to find a page on our web site.

⇒ We use routing to define URLs that are semantically meaningful to users and that can help with search-engine optimization (SEO).

(7.) Client Script And Client Framework

⇒ We can enhance the server-based features of ASP.NET by including client-script functionality in ASP.NET Web Form pages.

⇒ We can use client script to provide a richer, more responsive user interface for their users.

⇒ We can also use client script to make asynchronous calls to the web server while a page is running in the browser.

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(8.) Performance: Web Forms have good performance and allows us to modify performance related to page and server control processing, state management, data access, application configuration and loading, and efficient coding practices.

(9.) membership: Project's Account folder contains the files that implement the various parts of membership: registering, logging-in, changing password, and authorizing access.

⇒ Additionally, ASP.NET WebForms supports OAuth and OpenID.

⇒ These authentication enhancements allow users to log into your site using existing credentials, such as Facebook, Twitter and Google.

(10.) Security:

⇒ developing a secure application is most important aspect of software development process.

⇒ ASP.NET Web Forms allow us to add extensibility points and configuration options that enable us to customize various security behaviours of the application.

* Difference Between Query String And Cookies :

⇒ Cookies :- Cookies is a text file stored on client machine when we surf anything on internet by the server automatically we don't have to create it.

⇒ Query String :- Query String is the limited way to pass information to the web server while transferring from one page to another page. This information is passed in URL of this request.

⇒ Cookies :- Cookies is a small piece of information stored on the client machine. They are TWO TYPES of Cookies.

- 1.) Temporary Cookies
- 2.) Persistence Cookies

⇒ They are also known as Session Cookies. They are volatile in nature. When the browser is shutdown browser is erased.

⇒ They may be referred called Permanent Cookies. It may remain for month or year.

* How to create a cookie :-

⇒ It is really easy to create a cookie in asp.net with the help of Response object or HttpCookie.

* How to retrieve from Cookie ?

⇒ It is an easy way to retrieve cookie value from Cookies with the help of Request object.

* Cookie's Common Property :-

1.) Domain :- This is used to associate cookies to domain.

2.) Secure :- We can enable secure cookie to set true (HTTPS).

3.) Value :- We can manipulate individual cookie.

4.) Values :- We can manipulate cookies with key-value pair.

5.) Expires :- This is used to set expire date for the cookies.

* Advantages of Cookies :-

1.) It has clear text so the user can read it.

2.) We can store user preference information on the client machine.

3.) It is an easy way to maintain. ~~as it is~~

4.) Fast accessing. ~~Fast as it is far less~~

* Disadvantages of Cookie :-

- 1.) If the user clears the cookie information, we can't get it back.
- 2.) No security.
- 3.) Each request will have cookie information with page.

* How to clear the cookie information ?

- 1.) We can clear cookie information from client machine on cookie folder.
- 2.) To set `Expires` to cookie object.

* What is Post Back in ASP.NET ?

* What is Post Back and Auto Post Back ?

⇒ PostBack :- Request is sent to the server for a page and it will go for a full trip to the server and get all the respective data.

⇒ A Auto Post Back is request send from a client to server from the same page that the user is already working with.

=> Post Back is the name given to the process of submitting in ASP.NET Page to the Server for processing.

* IsPostBack: true at first time and false at next time

=> This property will check if the page is called for the first time or not, suppose you open a page for the first time it will get PostBack and next time you click on a button on the same page to submit some data and now if you check the property IsPostBack is false cause the page is not called for the first time so it will only send/receive data which are required by that event.

=> IsPostBack is a Boolean property of a Page when is set (=true) when a page is first loaded.

=> thus, the first time that the page loads the IsPostBack flag is false. and for subsequent Postbacks, it is true.

=> Each time a Postback occurs, the entire page including the Page Load is posted back and executed.

* AutoPostBack: ~~send post back to server~~ ~~on page load~~ ~~on button click~~ ~~to send request to server~~

⇒ AutoPostBack means when you want to send some request to the server on some control's event you can use this property.

⇒ For example on text change event of the textBox you want to check whether username is unique or not then you create ontextchange event for that textBox and you also set the AutoPostBack to true. ~~if we have~~ ~~if we have~~ ~~split in update panel~~

⇒ So when the event occurs it will send request to server with the username to check that it is unique or not.

⇒ if AutoPostBack is false your event will not be called. ~~=) for ei result goes~~

⇒ AutoPostBack is the mechanism, by which the page will be posted back to the server automatically based on some events in the Web Controls.

⇒ In some of the web controls, there is a property called AutoPostBack, which if set to true, will send the request to the server when an event happens in the control.

* Explain the HTTP Request And HTTP Response life cycle in ASP.NET Core.

Ans. ⇒ HTTP stands for Hypertext Transfer Protocol.

⇒ It is an application-level protocol.

Whenever you visit a website in your browser, it uses the HTTP protocol to communicate with the server.

⇒ An HTTP request consists of a verb, such as GET, a POST, PUT, DELETE, etc. The verb indicates the type of HTTP request. The request also contains the path of the resource that it's trying to access. In addition, all HTTP requests provide one or more headers in the key-value format to provide additional data to the server. Finally, a request can contain the body, which might represent the form content.

⇒ When the server receives an HTTP request, it processes that request and responds to the client. The response tells the client if the request was successful or not.

⇒ ASP.NET both provide all the functionality to handle an request. It includes Ensuring that the request is valid, Routing the request, managing Authentication and Authorization.

- ⇒ Am generating a response to the browser.
- ⇒ You can see either in HTML response or JSON, XML data.
- ⇒ A Reverse Proxy is simple server software that receive incoming request and forward them to get server you expose reverse proxy to the external traffic.
- ⇒ For example, internet safety behind Firewall. Only exposed to the reverse proxy no outside traffic can directly communicate with the web server.
- ⇒ IIS is the most popular is the reverse proxy on the reverse server you can use Apache or Nginx proxy on Mac or Linux Server.

* Rich Control :-

⇒ ASP.NET provides large set of control. These controls are provided and divided into different categories depends on their functionality. The following controls come under the Rich Control.

- 1.) File upload control
- 2.) Calender
- 3.) Grid Rotater
- 4.) Multi-view
- 5.) Wizard control

* Difference Between Authorization And Authentication :-

Ans. :-	Authorization	Sr.	Authentication
	1.) While in Authorization Process, the persons or users authority are checked for accessing the resource.	1.)	In the Authentication process, the identity of user are checked for providing the access to the system.
	2.) While in this process, users or person are validate.	2.)	In the Authentication process, users or person are verified.
	3.) While this process is done after the Authentication process.	3.)	It is done before the Authorization process.
	4.) While it needs the users privilege or security level.	4.)	It needs usually the users login details.
	5.) While it determine what permission does the user have.	5.)	Authentication determine whether the person is user or not.
	6.) Generally, Transmits information through an Access Token.	6.)	Generally, Transmits information through an id Token.

Sr.	Authorization	Sr.	Authentication
7.)	The OAuth 2.0 Protocol Governs The overall System of user Authorization Process.	7.)	The Open ID Connect (OIDC) Protocol is an Authentication Protocol That is generally in charge of user Authentication Process.
8.)	Popular Authorization Technique :- i.) Role Based Access Control (RBAC) ii.) JSON Web Token (JWT) iii.) OAuth 2.0 Authorization iv.) OpenID Authorization	8.)	Popular Authentication Technique :- i.) Password Based Authentication ii.) Password less Authentication iii.) 2FA / MFA (Two Factor Authentication / multiple Factor Authentication) iv.) Single sign on (SSO) v.) Social Authentication
9.)	The Authorization Permission cannot be change by user as this are granted by the owner system. only he / she has The ACCESS TO the change it.	9.)	The Authentication Credential can be change in part or when Required by user.

Authorization

10.) The user Authorization not visible at the user end.

11.) The user Authorization is carry out through the Access Rights to Resource by using Role That have been Redefine.

12.) Example :- after an Employee successfully Authenticate , The System determine what information are Allow To Access.

Authentication

10.) The user Authentication is visible at The user end.

11.) The user Authentication is identify with username , Password , Face Recognize And Fingerprint .

12.) Example :- Employee in a company are Required to Authenticate through The Network Access Through Company email .

**Repeater And Data list :-**

⇒ Repeater And Data list And grid view are data Bound control that Bound to a data source Control like SQL data source , Linque data source to display And modified data in your ASP.net web application.

⇒ Data Bound control are Composite

control that contains others ASP .net control like asp label , Textbox , dropdown list into a single layout.

* Difference Between Data list And Repeater :

sr.	Data list	sr.	Repeater
1.)	Rendered as Table.	1.)	Template driven.
2.)	Data Read Automatically generate from The data source.	2.)	This features is not supported.
3.)	selection of row is supported.	3.)	selection of Row is not supported.
4.)	Editing of contents is supported.	4.)	Editing of contents is not supported.
5.)	You can arrange data items Horizontally or vertically in Data list by using Property Repeat - Direction.	5.)	This features is not supported.
6.)	Performance is slow as compared to Repeater.	6.)	This is very light weight and fast data control among all the data control.

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* Difference between Gridview and Repeater :

⇒ Sr.	GridView	Sr.	Repeater
1.)	It was introduced with ASP .Net 2.0	1.)	It was introduced with ASP .Net 1.0
2.)	Rendered as Table.	2.)	Template driven.
3.)	Automatically generates columns from The data source.	3.)	This features is not supported.
4.)	Selection of row is supported.	4.)	Selection of row is not supported.
5.)	Built-in Paging and Sorting is provided.	5.)	You need to write custom code.
6.)	Supports auto format or style features.	6.)	This has no this features.
7.)	Editing of contents is supported.	7.)	Editing of contents is not supported.
8.)	Performance is very slow as compared to Repeater.	8.)	This is very light weight and fast data control among all the data control.

Difference Between Gridview And Data list :

Sr.	GridView	Sr.	Data list
1.)	It was introduced with ASP .Net 2.0.	1.)	Built-in Paging and Sorting is provided.
2.)	You need to write custom code built-in support for update and delete operation.	2.)	Need to write code for implementing update and delete operation.
3.)	Support Auto Format or Style Features.	3.)	This feature is not supported.
4.)	Repeat direction property is not supported.	4.)	You can arrange data item horizontally or vertically in DataList by using Repeat direction.
5.)	Does not support customization Row Separator.	5.)	Support customization Row Separator by using Separator Template.
6.)	Performance is slow as Data list.	6.)	Performance is fast compare to Grid view.

* Tree view control :-

- => The Tree view control is used to display hierarchical representation of items similar to the way file and folder structures are displayed.
- => In the left side of the Windows Explorer, each node may contain one or more child nodes.

* Property of Tree View :-

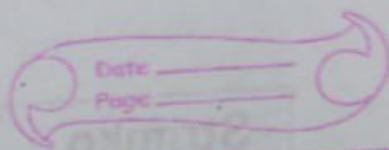
- =>
- 1-> BackColor
 - 2-> Background image
 - 3-> Background image layout
 - 4-> Border style
 - 5-> CheckBox
 - 6-> Data Bind
 - 7-> Font height
 - 8-> Forecolor
 - 9-> Item height
 - 10-> Node
 - 11-> Path Separator
 - 12-> RightToLeft layout
 - 13-> Scrolling
 - 14-> Select Node
 - 15-> Tool Tip
 - 16-> +, -
 - 17-> Sorted
 - 18-> Top Node
 - 19-> Visible Count

* methods of the Tree View Control :-

- 1) CollapseAll
- 2) ExpandAll
- 3) SetNodeAt
- 4) GetNodeCount
- 5) Sort
- 6) ToString

:- used to display

- Q. 1.) Explain The life cycle of ASP .Net Web Page.
- Q. 2.) Explain Global .aspx And Web .config file in brief.
- Q. 3.) Explain The use of Panel control.
- Q. 4.) List of features ~~IOBE~~
- Q. 5.) Difference Between Literal Control and Label Control.
- Q. 6.) Explain The Auto Post Back.
- Q. 7.) What is a master page , Explain . Then concern Task of master page.
- Q. 8.) Explain The validated control.
- Q. 9.) Explain The Image URL And Navigation URL.
- Q. 10.) different type of Bough control . calculator , Tree view etc.
- Q. 11.) difference between Data Reader , Data Set and Data Table.
- Q. 12.) What is Connection and Command class.
- Q. 13.) Explain The Data Adapter.



14.) difference Between Session And Cookies.

15.) Explain Query String

16.) D-B list box and dropdown list.