UNIT NO 5

Regular Expression , Rollover and Frames

I	Basics of JavaScript Programming	10	04	04	04	12
II	Array, Function and String	10	02	04	08	14
III	Form and Event Handling	06	02	04	04	10
IV	Cookies and Browser Data	06	02	02	04	08
V	Regular Expression, Rollover & Frames	08	02	06	06	14
VI	Menus, navigation and web page protection	08	02	04	06	12
Total		**48**	**14**	**24**	**32**	**70**

Unit –V Regular Expression, Rollover and Frames	5a. Compose relevant regular expression for the given character pattern search. 5b. Develop JavaScript to implement validations using the given regular expression. 5c. Create frames based on the given problem. 5d. Create window object as per	5.1 Regular Expression - language of regular expression, finding non matching characters, entering a range of characters, matching digits and non digits, matching punctuations and symbols, matching words, replacing a the text using regular expressions, returning the matched characters, regular expression object properties.

Unit	**Unit Outcomes (UOs)** (in cognitive domain)	**Topics and Sub-topics**
	the given problem. 5e. Develop JavaScript for creating rollover effect for the given situation.	5.2 Frames – create a frame, invisible borders of frame, calling a child windows, changing a content and focus of a child window, writing to a child window, accessing elements of another child window. 5.3 Rollover – creating rollver, text rollver, Multiple actions for rollover, more efficient rollover.

5.1 Regular Expression

- A regular expression is a sequence of characters that forms a specific search pattern.
- This search pattern can be used for operations like text search, text replace and string validations.
- When you search for specific character or a string in a text, you can use this search pattern to describe what you are searching for.
- A regular expression can be a single character, a string or a more complex pattern.
- search() ,replace() , test() function is used.

Syntax - /pattern/modifiers;

pattern -is a string that states the pattern of the regular expression or it can be an another regular expression.
modifiers- it is an optional filed which may contain any of the "g ",”i” and "m" attributes that provide global, case- insensitive, and multi-line matches, respectively.

5.1.1 Language of Regular Expression

- A set of words that can be derived by using the regular expression is known as language of that regular expression.
- Each and every word of that language can be defined by the set of alphabets of that present in the pattern of the regular expression.
- There are many special characters are available which is used to define a regular expression
- **Brackets-**Brackets () have a special meaning when used in the context of regular expressions. They are used to find a range of characters.

Sr. No	Expression	Description
1	[…]	It specifies to find any one character between the brackets.
2	[^…]	It specifies to find any one character not between the brackets.
3	[0-9]	It specifies to find any decimal digit from 0 through 9.
4	[a-z]	It specifies to find any character from lowercase a through lowercase z.
5	[A-Z]	It specifies to find any character from uppercase A through uppercase Z.
6	[a-Z]	It specifies to find any character from lowercase a through uppercase Z.

5.1.1 Language of Regular Expression

- **Qualifiers-** Qualifiers are used to find the sequence characters contain in text.
- The frequency of character sequences can be denoted by a special character.
- Each special character has a specific meaning.
- The special characters such as +,* ,?, and $ are used.

Sr. No	Expression	Description
1	p+	It specifies to find any string containing one or more p's.
2	P*	It specifies to find any string containing zero or more p's.
3	P?	It specifies to find any string containing at most one p.
4	p{N}	It specifies to find any string containing a sequence of N p's.
5	p{2,3}	It specifies to find any string containing a sequence of two or three p's.
6	p{2, }	It specifies to find any string containing a sequence of at least two p's.
7	p$	specifies to find any string with p at the end of it.
8	^p	specifies to find any string with p at the beginning of it.

5.1.1 Language of Regular Expression

- **Metacharacters-** A metacharacter is an alphabetic character followed by a backslash. Each combination of alphabetic character with backslash has unique meaning.

Sr. No	Expression	Description
1	.	Find a single character, except newline or line terminator
2	\w	Find a word character
3	\W	Find a non-word character
4	\d	Find a digit
5	\D	Find a non-digit character
6	\s	Find a whitespace character

Sr. No	Expression	Description
7	\S	Find a non-whitespace character
8	\b	Find a match at the beginning/end of a word, beginning like this: \bHI, end like this: HI\b
9	\B	Find a match, but not at the beginning/end of a word
10	\0	Find a NULL character
11	\n	Find a new line character
12	\t	Find a tab character

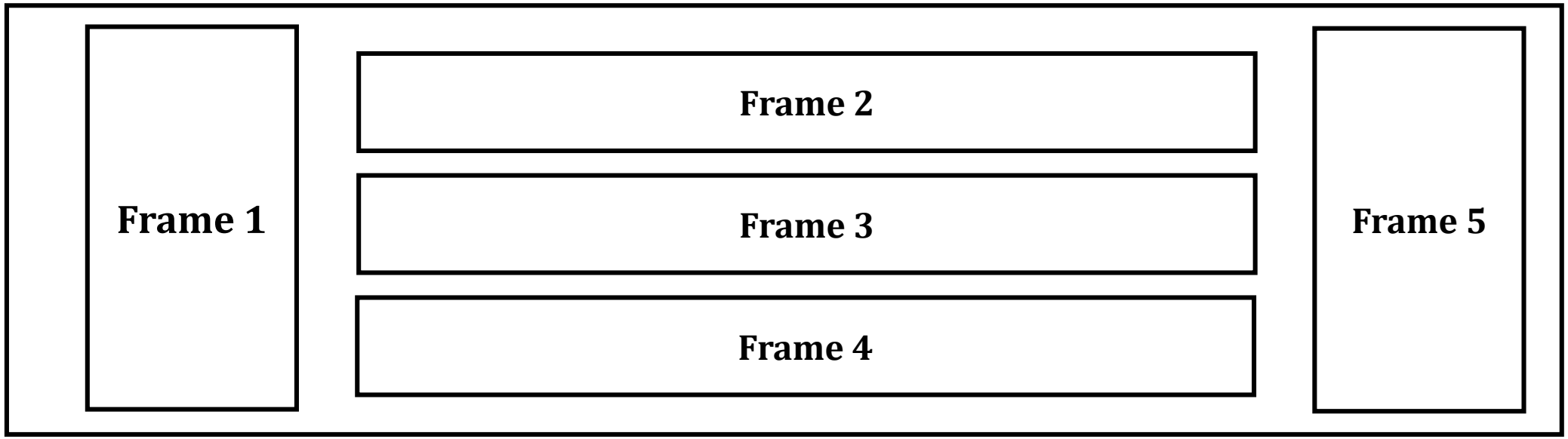
5.1.1 Language of Regular Expression

- **RegExp Function-** The RegExp consist of following functions to perform operation related to regular expression : msbte12$@gmail.com

Sr. No	Expression	Description
1	compile()	Deprecated in version 1.5. Compiles a regular expression
2	exec()	Tests for a match in a string. Returns the first match
3	test()	Tests for a match in a string. Returns true or false
4	toString()	Returns the string value of the regular expression

5.2 Frame

- HTML document can be divided into multiple parts by using frame.
- If we want to display different information in different parts of webpage, then it can be possible by defining that information in a different frame.
- By using frame we can define the multiple views.
- With the help of multiple views we can keep specific information visible while at the same time other information will be invisible i.e. it may be hide, scrolled or replaced.
- The multiple frames can be set in one webpage as follows:



5.2 Frame

Create a Frame

- To define a frame we use<frame> tag within <frameset> tag.
- Each <frame> in <frameset> may have different attributes.

Attributes of <frameset>

Sr. No	Attribute	Value	Description
1	cols	Pixel , percentage and “*”	It Specifies the number and size of column in frameset.
2	rows		It Specifies the number and size of rows in frameset

Attributes of <frame>

Sr. No	Attribute	Value	Description
1	frameborder	0 or 1	1=border , 0= without border
2	name	Any name	Name of frame
3	src	URL	Path of the html file

5.3 Rollover

Rollover-

- We can change the appearance of the webpage by using mouse rollover.
- When mouse is moved to any element of webgage, the appearance of that element will be changed. It is also called as mouseover.
- If the mouse cursor is moved to an image, then image can be changed, or any image appearance related effect can be taken place.
- It is also applicable to button, label, table, etc.
- Rollover is used to improve user experience and quality of webpages.

Creating Rollover-

- To create rollover we use 'onmouseover' event.
- When the mouse pointer is moved onto an element, or onto one of its children, the onmouseover element is occured.
- The onmouseover event is generally used with the 'onmouseout'.
- When the mouse pointer is moved out of the element, the onmouseout element is occurred.
- We can add these events to an image