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Computer Application
15 Control Structure in JavaScript
Part - II

Answer to the following questions (2 Marks):

1. What are the different types of control statement used in JavaScript?

There are **two** types of controls,

1. Branching / Selection
2. Looping / repetitive

2. What is meant by conditional statements in JavaScript?

Statements are executed in the order they are found in a script.

Conditional statements execute or skip one or set of statements depending on the value of a specified conditional expression.

3. List out the various branching statements in JavaScript?

There are different branching statements. They are,

if statement (Single way branch)

if ... else statement (Two way branch)

switch statement (Multi way branch)

else if statement (Two way branch)

4. Write the general syntax for switch statement

switch(expression)

```
{  
case label1:      statements1;      break;  
case label2:      statements2;      break;  
case labelN;      statements - N;    break;  
default: (optional)  
statements;  
}
```

5. Differentiate the break and continue statement.

break statement	continue statement
The break statement will terminate the loop early	The continue statement will skip back to the loop condition check.
JavaScript also supports statements used to modify flow control	

Part - III

Answer to the following questions (3 Marks):

1. What is if statement and write its types.

The if statement is the fundamental control statement that allows JavaScript to make decisions to execute statements conditionally.

This statement has two forms. The form is for only true condition.

The syntax is

Types of if statement

if (condition)

if else statement

{

else if statement

True block;

nested if statement

}

2. Write the syntax for else-if statement.

if (Condition 1)

{ block 1; }

else if (condition 2)

{ block 2; }

else if (condition 3)

{ block 3; }

else

{ block 4; }

3. What is called a loop and what are its types?

In JavaScript there are times when the same portion of code needs to be executed many times with slightly different values is called Loops. .

JavaScript supports three kinds of looping statements. Main three types

They are **for** loop ,**while** loop and **do..while** loop

Two categories are entry check and exit check

4. Differentiate between while and do while statements

while statements	do while statements
first condition will be evaluated and then only based on the result of the condition the body of the loop will be executed or not	do..while loop body of the loop always executed at least once before the condition can be executed
Entry check loop	Exit check loop
Checking and execution time of loop is differ in while loop	Checking and execution time of loop is same in do while loop

5. What message will be displayed, if the input for age is given as 20, for the following snippet.

Message will be display like
you are eligible to get Driving licence

Part - IV

Answer to the following questions (5 Marks):

1. Explain for loop with example

- The **for** loop is a very rigid structure that loops for a pre-set number of times.
- In JavaScript **for** structure is very flexible, which makes this type is very useful.

The syntax:

```
for(initialization; condition; increment/decrement)
{
    Body of the loop;
}
```

The for structure within parenthesis there are **three** parts each separated by **semicolon ;**. They are,

- The **first** part of the loop initialize a variable which is also called as **control** variable.
- The **second** part is the conditional statement that determines how many times the loop will be iterated (executed).
- The **third** and final part determines how the value of control variable is changed (Incremented/Decrement)

Example:

```
for (var x=0;x<3;x++)
{ document.write(x+ "<br>"); }
```

2. Explain switch case statement with example

- JavaScripts offers the **switch** statement as an alternate to using **if...else** structure.
- The switch statement is especially useful when testing all the possible results of an expression.

The syntax of a switch structure as the following:

```
switch(expression)
{
case label1:      statements1;          break;
case label2:      statements2;          break;
case labeln;      statements - N;       break;
default: (optional)
statements;
}
```

The **default** structure is can be at the end of a switch structure if the result of the expression that do not match any of the case labels.

Example:

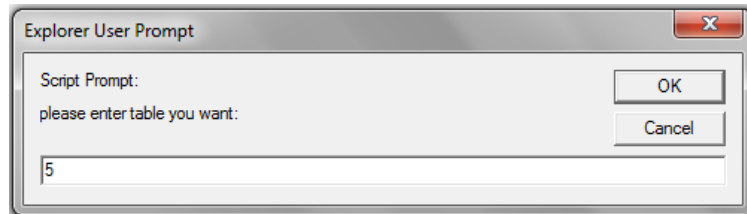
```
var ch=2;
switch(ch)
{
case 1:      document.write("Your Grade is Outstanding..");    break;
case 2:      document.write("Your Grade is Excellent..");      break;
case 3:      document.write("Your Grade is Good..");           break;
case 4:      document.write("Your Grade is Satisfactory..");    break;
default:     document.write("Your Grade Poor and have to re-appear Exam..");
}
```

3. Write the output for the following program

Output:

Multiplication for your need

5x0=0
5x1=5
5x2=10
5x3=15
5x4=20
5x5=25
5x6=30
5x7=35
5x8=40
5x9=45
5x10=50



4. Write a Java Script program using while statement to display 10 numbers.

```
<Html>
<Head>      <Title>Program - To test while statement in JavaScript </Title> </Head>
<Body>
<script language="javascript" type="text/javascript">
document.write("<h2> Using while Statement </h2>");
var no2=0;
while(no2<10)
{
document.write(no2+" ");
no2=no2+1;
}
</script>
</Body>
</Html>
```

OUTPUT:

0 1 2 3 4 5 6 7 8 9

Explain Branching Statements with types

JavaScript supports branching statements which are used to perform different actions based on different conditions.

Branching is a transfer of control from the current statement to another statement or construct in the program unit.

A branch alters the execution sequence

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