DCN FINAL PAPER ADDITION – ERROR DETECTION AND CORRECTION IN MULTI USER REQUEST SYSTEM USING ENHANCED CRC ALGORITHM

CHANGES IN C++ CODE OF PROJECT:

we added support for message lengths upto 2^{32} bits using a CRC polynomial 0x973AFB51. We added more choices also using CRC-16 CCITT, a 16 bit CRC generator polynomial, now the user has more options of a CRC polynomial where the polynomial is automatically decided based on the message length.

DATABASE HANDLING PHP CODE:

//uploading the file to db:

//HTML FOR THE FORM TO UPLOAD THE FILE

```
<!DOCTYPE html>
<html>
<head>
	<title>Upload File to Database</title>
</head>
<body>
	<h1>Upload the messgaes to the database</h1>
<form action="" method="post" enctype="multipart/form-data">
	<label for="file">Filename: </label> <input type="file" name="uploadfile"
id="file"/>
<input type="submit" value="Submit" name="submit">
</form>
```

//PHP SCRIPT TO UPLOAD THE FILE TO DB

```
<?php
if(isset($_POST['submit']))
{
	if ($_FILES["uploadfile"]["error"] > 0)
{
echo "Error: " . $_FILES["file"]["error"] . "<br />";
}
elseif ($_FILES["uploadfile"]["type"] !== "text/plain")
{
echo "File must be a .txt";
}
else
```

```
{
//GIVEN FILE HAS BEEN UPLOADED WITHOUT ERROR AND IS A TEXT FILE
$con = mysqli_connect("localhost","root","","project");
$uploaddir = "D:\uploads";
$uploadfile = $uploaddir.'\\'.basename($_FILES['uploadfile']['name']);
if(!$con)
{
        die("Connection to db failed :". mysqli_connect_error);
}
//MOVE THE FILE TO A TEMPORARY LOCATION BEFORE UPLOADING
if(move_uploaded_file($_FILES['uploadfile']['tmp_name'],$uploadfile))
{
        echo "<script>alert('given file moved');</script>";
}
else
  {
      if(!is_writable($uploadfile))
        echo "<script>alert('Given folder is not writable');</script>";
      else
        echo "<script>alert('died'+".$_FILES["uploadfile"]["error"].");</script>";}
$exec =exec("hostname");
$hostname=trim($exec);
$ip = gethostbyname($hostname);


$fp = fopen($uploadfile, 'r');
   while ( ($line = fgets($fp)) !== false) {
        //TAKE EACH LINE OF FILE AND UPLOAD IT INTO DB ALONG WITH
//  IP ADDRESS OF SENDER
        $query = "INSERT INTO message VALUES('$ip','$line')";
        if(mysqli_query($con,$query))
                echo "<script>alert('success');</script>";
        else
                echo "<script>alert('error in uploading');</script>";

   }
        mysqli_close($con);
   echo "<script>alert('The given file has uploaded to the database');</script>";
}
}
 ?>
```

```
</body>
</html>
```

//**DOWNLOADING THE FILE FROM DB:**

//HTML FOR DOWNLOADING FORM

```
<!DOCTYPE html>
<html>
<head>
	<title>Download The Message From Database</title>
</head>
<body>
<h1>Download the messages from the database</h1>
<form action="" method="post">
	<label for="ip">Enter the Ip address of the user from Whom messages have to be received</label>
	<input type="text" name="ip" id="ip">
	<input type="submit" name="submit" id="submitbutton">
```

//IF GIVEN FILE IS PRESENT ON SERVER COMPUTER,USE 'A' TAG TO //DOWNLOAD THE FILE ON COMPUTER OF ANY DEVICE CONNECTED //TO THE NETWORK

```
	<a href="./downloadsforproject/crc.txt" download>Click to download File</a>
</form>
```

//PHP SCRIPT TO DOWNLOAD FILE FROM REQUESTED IP OF SENDER //WITH/WITHOUT ERRORS

```
<?php
if(isset($_POST['submit']))
{
	$ip = $_POST['ip'];
	$con = mysqli_connect("localhost","root","","project");
	if(!$con)
	{
		echo "Error in connecting to the database";
	}
	$query ="SELECT message FROM message WHERE id = '$ip'";
	$q1 = mysqli_query($con,$query);
	if(mysqli_affected_rows($con) == 0)
    echo "<script>alert('The User With This Ip has not Yet sent any Message to The DB');</script>";
 else
```

```
 { if($myfile = fopen("./downloadsforproject/crc.txt", "w"))
     echo "<script>alert('given file has been created');</script>";
     else
     echo "<script>alert('error in creating file');</script>";

       while($row = mysqli_fetch_array($q1,MYSQL_ASSOC))
       {//READ EACH LINE FROM DB AND STORE IN FILE
         $p = mt_rand(0,4);
         if($p ==3 || $p == 4)
         {//WITH SOME PROBABILITY CORRUPT 1 BIT OF EACH SEGMENT
                 $pos = mt_rand(0,7);

                 if($row['message'][$pos] == 1)
                         $row['message'][$pos] = 0;
                 else
                         $row['message'][$pos] =1;

         }
         fwrite($myfile, $row['message']);
       }
     echo "<script>alert('The messages sent by the user with the given ip has been sent as
a text file');</script>";
 }
}

?>
</body>
</html>
```