BIL103E - Introduction to Information Systems and Computer Engineering

Final Exam   07.01.2009 (Keys)
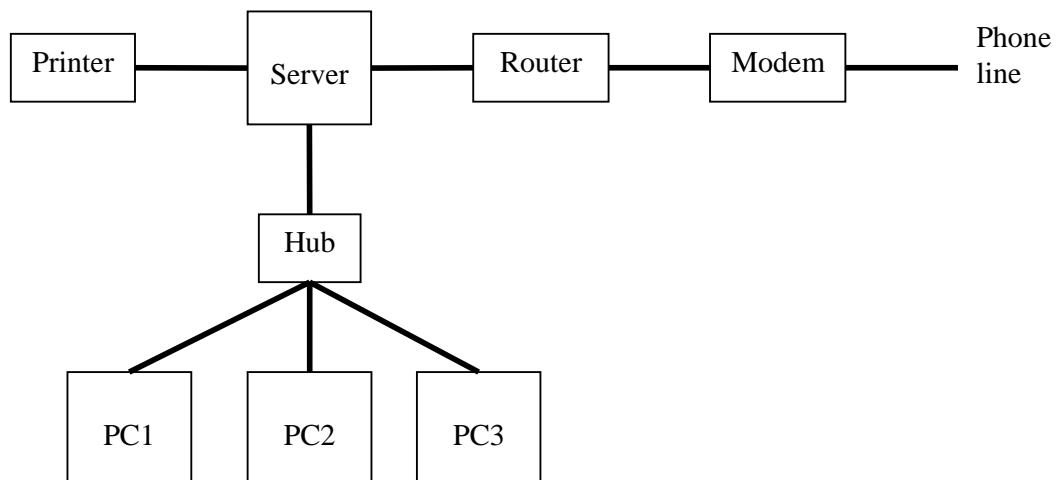
1)

LAN: Local Area Network	**WAN:** Wide Area Network
HTTP: Hyper Text Transport Protocol	**URL:** Uniform Resource Locator
TCP/IP: Transmission Control Protocol / Internet Protocol	**DNS:** Domain Name System
Modem: Modulator / Demodulator	**FTP:** File Transfer Protocol
HTML: Hyper Text Markup Language	**ADSL:** Asymmetric Digital Subscriber Line

2)

Repeater: Repeater is a device with two ports that just amplifies the signal it receives.
Hub: Hub is a multiport repeater to enhance signal within the same LAN. A hub joins multiple computers together to form a single network segment.
Modem: Modem is a device that converts digital signal to analog signal (modulation) and vice versa (demodulation). Modulation is neccessary because the telephone lines were designed to transmit analog signals only.
Switch: Switch is a small device that joins multiple computers together within one LAN. Switch can be considered as a multi-port bridge and a smart hub.
Router: Router is a WAN device that connects one network to another network.

3)

4)

```
<html>
<body>
<H2>CONTENT OF BOOK</H2>
<P>

<UL>
<LI> <a href="Chap1.pdf"> Chapter1 </a> </LI>
<LI> <a href="Chap2.pdf"> Chapter2 </a> </LI>
<LI> <a href="Chap3.pdf"> Chapter3 </a> </LI>
<LI> <a href="Chap4.pdf"> Chapter4 </a> </LI>
</UL>

<P>
<a href="http://www.itu.edu.tr"> Go to İTÜ Main Page </a>

</body>
</html>
```

5)

```
<?php

$N = $_GET['N'];
echo "<H3> Upper Limit = ". $N . "</H3>";

echo "N    S<sub>N</sub> <br>";
echo "---   -------- <br>";

$S = 0;
for ($k = 0; $k <= $N; $k++)
{
  $S = $S + pow(-1, $k) / pow(2 * $k + 1 , 3);
  echo $k . "    " . $S  . "<br>";
}

?>
```

6a)

```
<html>  <body>

<form action="central.php" method="post">

PLEASE ENTER THE COORDINATES OF CENTRAL POINT <BR>
CX: <input type="number" name="CX"> <BR>
CY: <input type="number" name="CY"> <BR>

<input type="submit" value="Send">
<input type="reset" value="Clear">

</form>

</body>  </html>
```

6b)

```php
<?php

$CX  = $_POST['CX'];
$CY  = $_POST['CY'];

echo "<H3> Coordinates of Central Point: CX = ". $CX. " , CY = " .  $CY . "</H3>";

$file = fopen("coordinates.txt", "r") or exit("Dosya acilamadi!");

echo "<table border=1>";
echo "<th>X Coordinate</th>";
echo "<th>Y Coordinate</th>";
echo "<th>Distance to Central Point</th>";

$NearestDist = 9999999999;  // Initial value

while(!feof($file))
{
  $satir = fgets($file);

  $wordChunks = explode("\t", $satir); // Puts into word array

  $X = $wordChunks[0];
  $Y = $wordChunks[1];

  $distance = sqrt( pow($X - $CX , 2) + pow($Y - $CY , 2) ) ;

  echo "<tr>";
  echo "<td>".$X."</td>";
  echo "<td>".$Y."</td>";
  echo "<td>".$distance."</td>";
  echo "</tr>";

  if ($distance < $NearestDist)
  {
     $NearestDist = $distance;
     $XNearest = $X;
     $YNearest = $Y;
  }
}

echo "</table>";

fclose($file);

echo "<P> <H3> (" . $XNearest . " , " . $YNearest . ") is the nearest point with Distance = " . $NearestDist;

?>
```