



Episode 17 (Sales System I)



Kitsune! What kind of online store are you going to create? Where do I start?



I've waited a month, Tanuki, and I'm sure you've finished building the various servers. If they are not done, we can't move on. Let's say the server is set up to create a music CD sales store. The first step is to create a user interface (presentation layer) program that will run on the browser. The main language is HTML, but if you want to make something more elaborate, you can combine it with JavaScript. Java applets are not available nowadays.

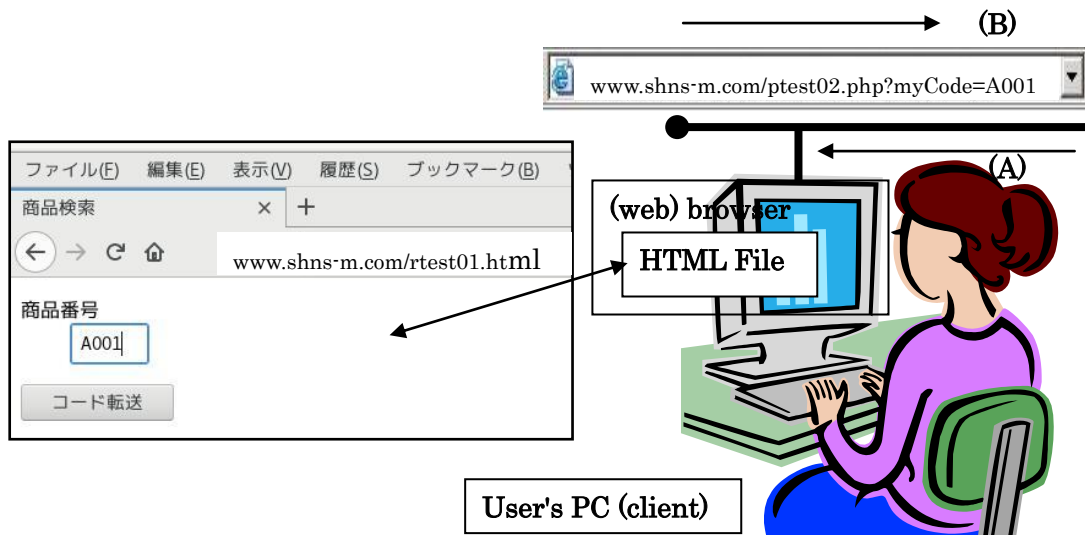


OK, OK! I'm ready to go. As I recall, JavaScript is a different language from Java. But this time, we're going to make the necessary parts in HTML only, right?



Tanuki, you are right. At first, we create a program that executes a [SELECT statement] that searches the database for the existence of data and reads the data if it exists.

(1) Creation of user interface (presentation layer)

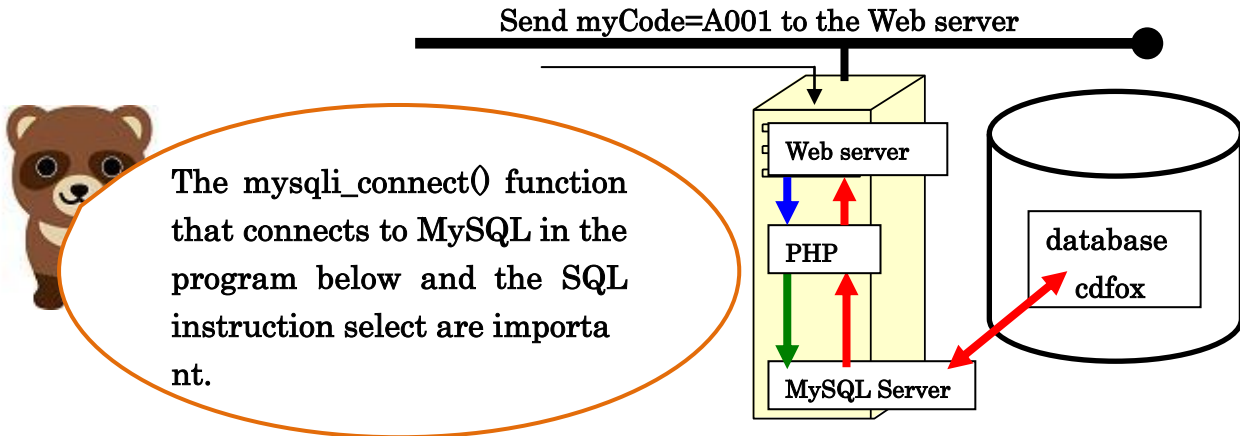


Script for HTML file (rtest01.html)

```
<HTML>
<HEAD>
<TITLE> Product Search</TITLE>
<BODY>
<FORM NAME="myForm" ACTION="rtest02.php" METHOD="get"> .....①
<DL>
<DT> Item Number
<DD><INPUT TYPE="text" NAME="myCode" SIZE="4" MAXLENGTH="8" >
</DL>
<INPUT TYPE="submit" VALUE=" code transfer">
</FORM>
</BODY>
</HTML>
```



The file called in ① of the above program is rtest02.php. Next, let me explain rtest02.php (see the figure below). The rtest02.php file receives the myCode data and stores it in the variable \$myCode, leaving the interpretation and execution of the rtest02.php script to PHP. After the connection is established, select the database and issue a query (Select statement). The MySQL server interprets the received query, searches the database, and sends the corresponding data to the terminal browser via the Web server in the reverse order.



(2) Database search (Select statement)

Creation of server side script rtest02.php using PHP

rtest02.php (Script Example-1)

```

<HTML>
<HEAD>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  <TITLE> search results</TITLE>
</HEAD>
<BODY>
<?php
$myCode = $_GET['myCode'];
$abc = mysqli_connect("localhost","ftpuser","ftpuser","cdfox");
$query = "select * from cdshohin where scode = '$myCode'";
if ($result = mysqli_query($abc, $query)) {
    echo "select Successfully connected\n";
    foreach($result as $row){
        $scode = $row['scode'];
        $sname = $row['sname'];
        $jaketto = $row['jaketto'];
        $music = $row['music'];
        $zaiko = $row['zaiko'];
        $kakaku = $row['kakaku'];
    }
}
mysqli_close($abc);
?>

```

rtest02.php (Script Example-2)

```
<table border="1">
<TR>
<TD><?php echo $sname; ?></TD>
Jacket (image processing):<BR>
<BR>
Music Listening:<BR>
<audio src="./music/<?php echo $music; ?>" type="audio/mp3" autoplay controls loop
></audio>
<BR>
</table>
</BODY>
</HTML>
```

Execution result of rtest02.php
Sazae-san melody is played.



Kitsune, when I run these two programs, do I get the results shown on the right? If this appears in the browser of the terminal, is it OK?

I tried running them, but neither the boar-like image nor the Sazae-san music is playing.

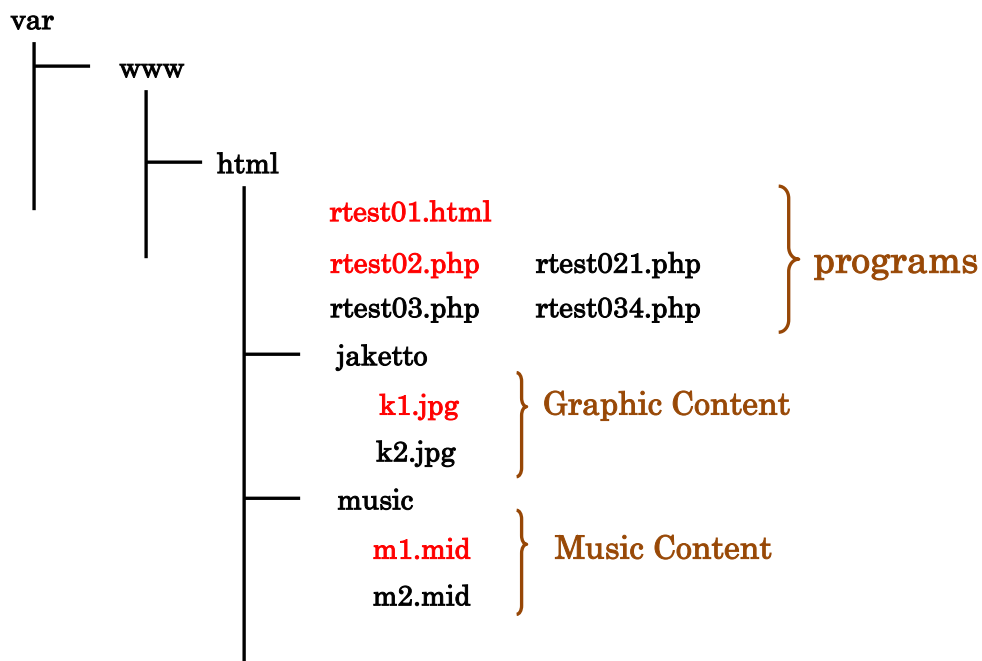


Tanuki, don't panic. The images and music data used in a website are called contents. You have probably heard of it, too. You understand that if you don't prepare these contents as files, they won't be displayed and music won't be played. The image file name is stored in \$jaketto and the music file name is stored in \$music. when you build a web server, the place to store programs and contents is determined as shown in the figure below. However, the contents can be stored in other directories.

Web server (Apache) document root

The default document root for Apache is the `"/var/www/html"` directory.

The hierarchical structure is as follows



Tanuki, one thing to note. You can't use any content, whether it's images or music, without the permission of the creator, because the content is copyrighted. If you want to use them for your own study and testing on your own computer, there is no problem. However, there are free contents that you can use freely, so there is no problem if you use them and make them available to the public. Otherwise, you have to prepare your own images and music. By the way, k1.jpg is an image like a wild boar and m1.mid is the music of Sazae-san.



Kitsune, you store images and music in a directory, but **isn't content stored in a database?**



Tanuki, you make a good point. Access, for example, for stand-alone use, stores content in a database, but the types of image and music files that can be stored are limited. **So, images, music, and movies (including movies) delivered from the Internet are stored in a directory, regardless of file type, and only the file name is stored in the database. This is a very important concept.** Hence, "\$jaketto = "kl.jpg"" and "\$music = " ml.mid". Naturally, "kl.jpg" and "ml.mid" will be stored in the database.



I see, so the database does not store the actual contents, only the file names?
Then tell me about that database!



To briefly explain databases, we have to talk about the database server (MySQL), which is an even longer story, so we'll talk about the rest of it in **Episode 18**.

Next, we will talk about creating a database that can be used on the Internet, which is necessary to run rtest01.html and rtest02.php!

Translated at DeepL