Lab 7 cps 530

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Intro:
This page demonstrates how an html form can work together with a perl script to handle user input on the server side. The idea is that you can write a short message, upload an image, and the page will display.

Links:
https://www.cs.torontomu.ca/~b53khan/lab07b.html

https://www.cs.torontomu.ca/~b53khan/lab07c.html

Code:

lab07b.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Bed & Breakfast Reservation</title>
<link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap"
rel="stylesheet">
<style>
 body {
    font-family: 'Poppins', sans-serif;
    background: #f2ecff;
    padding: 30px;
    color: #2c2c2c;
 }

 h2 {
    text-align: center;
    color: #5b1ddf;
    font-weight: 600;
    letter-spacing: 1px;
 }

 form {
    background: #fff;
```

```css
  width: 60%;
  margin: 30px auto;
  padding: 25px 35px;
  border-radius: 16px;
  box-shadow: 0 0 20px rgba(123, 63, 255, 0.1);
  border-top: 6px solid #7a3cff;
}

label {
  display: block;
  font-weight: 500;
  margin-top: 15px;
  color: #4b4b4b;
}

input, select {
  width: 100%;
  padding: 10px 12px;
  border: 1px solid #ccc;
  border-radius: 8px;
  font-size: 14px;
  margin-top: 6px;
  outline: none;
  transition: all 0.2s ease-in-out;
}

input:focus, select:focus {
  border-color: #7a3cff;
  box-shadow: 0 0 6px rgba(122, 60, 255, 0.3);
}

input[type="submit"] {
  background-color: #7a3cff;
  color: white;
  border: none;
  border-radius: 10px;
  padding: 12px 0;
  font-size: 16px;
  font-weight: 600;
  cursor: pointer;
  margin-top: 25px;
  transition: background 0.3s, transform 0.2s;
```

```css
    }

  input[type="submit"]:hover {
    background-color: #5b1ddf;
    transform: scale(1.02);
  }

  .container {
    text-align: center;
  }

  @media (max-width: 768px) {
    form {
      width: 90%;
    }
  }
}
</style>
</head>
<body>
  <h2>Bed & Breakfast Reservation</h2>

  <form action="https://www2.cs.torontomu.ca/~yourusername/cgi-bin/lab07b.cgi"
method="POST">
    <label>First Name:</label>
    <input type="text" name="first" required>

    <label>Last Name:</label>
    <input type="text" name="last" required>

    <label>Street Address:</label>
    <input type="text" name="street" required>

    <label>City:</label>
    <input type="text" name="city" required>

    <label>Postal Code (A1A 1A1):</label>
    <input type="text" name="postal" required>

    <label>Province:</label>
    <select name="province" required>
      <option value="">Select Province</option>
      <option>ON</option><option>QC</option><option>BC</option><option>AB</option>
```

```
      <option>MB</option><option>NB</option><option>NL</option><option>NS</option>

<option>PE</option><option>SK</option><option>NT</option><option>YT</option><option>NU
</option>
    </select>

    <label>Phone Number (10 digits):</label>
    <input type="text" name="phone" placeholder="4165551234" required>

    <label>Email Address:</label>
    <input type="email" name="email" placeholder="name@example.com" required>

    <label>Payment Method:</label>
    <select name="payment" required>
      <option value="">Select Payment Option</option>
      <option>Visa</option>
      <option>MasterCard</option>
      <option>American Express</option>
      <option>Paypal</option>
    </select>

    <div class="container">
      <input type="submit" value="Submit Reservation">
    </div>
 </form>
</body>
</html>
```

Lab07c.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Upload Image and Text </title>
<link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap"
rel="stylesheet">
<style>
 body {
    font-family: 'Poppins', sans-serif;
    background-color: #f2ecff;
```

```css
  margin: 0;
  padding: 40px;
  color: #2c2c2c;
}

h2 {
  text-align: center;
  color: #5b1ddf;
  font-weight: 600;
}

form {
  background: #fff;
  width: 60%;
  margin: 30px auto;
  padding: 25px 35px;
  border-radius: 16px;
  box-shadow: 0 0 20px rgba(123, 63, 255, 0.15);
  border-top: 6px solid #7a3cff;
}

textarea, input[type="file"] {
  width: 100%;
  padding: 12px;
  border-radius: 8px;
  border: 1px solid #ccc;
  margin: 10px 0 20px 0;
  font-size: 15px;
  transition: all 0.2s ease-in-out;
}

textarea:focus, input[type="file"]:focus {
  border-color: #7a3cff;
  box-shadow: 0 0 8px rgba(122, 60, 255, 0.3);
}

input[type="submit"] {
  width: 100%;
  background-color: #7a3cff;
  color: white;
  border: none;
  padding: 12px 0;
```

```
    border-radius: 10px;
    font-size: 16px;
    font-weight: 600;
    cursor: pointer;
    transition: background 0.3s, transform 0.2s;
}

input[type="submit"]:hover {
    background-color: #5b1ddf;
    transform: scale(1.02);
}

@media (max-width: 768px) {
    form {
        width: 90%;
    }
}
</style>
</head>
<body>
<h2>Upload Image and a Message</h2>

<form enctype="multipart/form-data"
action="https://www2.cs.torontomu.ca/~yourusername/cgi-bin/lab07c.cgi" method="POST">
    <label for="usertext"><b>Your Message:</b></label>
    <textarea id="usertext" name="usertext" rows="5" placeholder="Type something
meaningful..." required></textarea>

    <label for="image"><b>Select an Image:</b></label>
    <input type="file" id="image" name="image" accept="image/*" required>

    <input type="submit" value="Upload & Display">
</form>
</body>
</html>
```

Perl (lab07b.cgi)

```perl
#!/usr/bin/perl
use strict;
use warnings;

print "Content-type: text/html\n\n";

print qq{
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>My First Perl Program</title>
<link href="https://fonts.googleapis.com/css2?family=Poppins:wght@600&display=swap"
rel="stylesheet">
<style>
 body {
    font-family: 'Poppins', sans-serif;
    background-color: #f0f8ff;
    text-align: center;
    margin-top: 100px;
 }
 h1 {
    color: #0077cc;
    font-size: 3em;
 }
</style>
</head>
<body>
 <h1>This is my first Perl program</h1>
</body>
</html>
};
```

(lab07c.cgi)

```perl
#!/usr/bin/perl
use strict;
use warnings;
use CGI qw(:standard);
use CGI::Carp qw(fatalsToBrowser);

my $q = CGI->new;

my %F = map { $_ => scalar($q->param($_) // '') } qw(first last street city province
postal phone email payment);

my @errors;
push @errors, "Phone number must be exactly 10 digits (no spaces or dashes)"
 unless $F{phone} =~ /^\d{10}$/;
push @errors, "Postal code must match format A1A 1A1"
 unless $F{postal} =~ /^[A-Za-z]\d[A-Za-z] \d[A-Za-z]\d$/;
push @errors, "Invalid email address format"
 unless $F{email} =~ /^[\w\.\-]+\@([\w\-]+\.)+[A-Za-z]{2,}$/;

print $q->header();
print $q->start_html(
 -title => "Reservation Results",
 -style => { -code => q{
   body {
     font-family: 'Poppins', sans-serif;
     background-color: #f2ecff;
     color: #2c2c2c;
     padding: 40px;
   }
   .card {
     background: #fff;
     border-radius: 16px;
     box-shadow: 0 0 25px rgba(123, 63, 255, 0.1);
     padding: 30px 40px;
     max-width: 700px;
     margin: 0 auto;
     border-top: 6px solid #7a3cff;
   }
   h2 {
     text-align: center;
     color: #5b1ddf;
```

```
      font-weight: 600;
      margin-bottom: 20px;
    }
    .error-box {
      background-color: #f9f0ff;
      border: 2px solid #c77dff;
      border-radius: 10px;
      padding: 15px;
      margin-bottom: 20px;
      color: #5b1ddf;
    }
    .error-item {
      margin: 5px 0;
      font-weight: 500;
    }
    a {
      color: #7a3cff;
      text-decoration: none;
      font-weight: 600;
    }
    a:hover {
      text-decoration: underline;
    }
    .ok-box {
      background-color: #f9f5ff;
      border-left: 5px solid #7a3cff;
      padding: 20px;
      border-radius: 10px;
      line-height: 1.6em;
    }
    .ok-box b {
      color: #5b1ddf;
    }
    .thankyou {
      text-align: center;
      font-weight: 600;
      margin-top: 20px;
      color: #5b1ddf;
      font-size: 18px;
    }
}}
);
```

```perl
print qq{<div class="card">};

if (@errors) {
    print qq{<h2>Form Errors Found</h2>};
    print qq{<div class="error-box">};
    print qq{<div class="error-item">$_</div>} for @errors;
    print qq{</div>};
    print qq{<p><a href="../lab07b.html"> </a></p>};
}
else {
    print qq{<h2>Reservation Details</h2>};
    print qq{<div class="ok-box">};
    print qq{<p><b>Name:</b> $F{first} $F{last}</p>};
    print qq{<p><b>Address:</b> $F{street}, $F{city}, $F{province}, $F{postal}</p>};
    print qq{<p><b>Phone:</b> $F{phone}</p>};
    print qq{<p><b>Email:</b> $F{email}</p>};
    print qq{<p><b>Payment Method:</b> $F{payment}</p>};
    print qq{</div>};
    print qq{<p class="thankyou">Thank you for reserving with us!</p>};
}


print qq{</div>};
print $q->end_html;
```

(lab07c.cgi)

```perl
#!/usr/bin/perl
use strict;
use warnings;
use CGI qw(:standard);
use CGI::Carp qw(fatalsToBrowser);

my $q = CGI->new;

print $q->header();

my $text     = $q->param('usertext') // '';
my $filename = $q->param('image');
my $fh       = $q->upload('image');

print $q->start_html(
```

```
-title => "Uploaded Image & Text",
-style => { -code => q{
  body {
    font-family: 'Poppins', sans-serif;
    background-color: #f2ecff;
    color: #2c2c2c;
    padding: 40px;
    text-align: center;
  }
  .card {
    background: #fff;
    border-radius: 16px;
    box-shadow: 0 0 20px rgba(123, 63, 255, 0.15);
    padding: 30px;
    max-width: 700px;
    margin: 0 auto;
    border-top: 6px solid #7a3cff;
  }
  h2 {
    color: #5b1ddf;
    margin-bottom: 20px;
  }
  p {
    font-size: 18px;
    line-height: 1.5;
    color: #4b4b4b;
  }
  img {
    max-width: 90%;
    margin-top: 20px;
    border-radius: 12px;
    box-shadow: 0 0 10px rgba(123, 63, 255, 0.2);
  }
  a {
    color: #7a3cff;
    text-decoration: none;
    font-weight: 600;
  }
  a:hover {
    text-decoration: underline;
  }
}}
```

```perl
);

print qq{<div class="card">};

if ($filename && $fh) {
    my ($basename) = $filename =~ /([^\/\\]+)$/;
    my $upload_path = "../$basename";
    open(my $out, '>', $upload_path) or die "Cannot save uploaded image: $!";
    binmode $out;
    binmode $fh;
    my $buffer;
    while (read($fh, $buffer, 8192)) {
        print $out $buffer;
    }
    close $out;

    print "<h2>Your Upload Was Successful:)</h2>";
    print "<p>$text</p>";
    print qq{<img src="../$basename" alt="Uploaded Image">};
    print qq{<p><a href="../lab07c.html">Upload another image</a></p>};
}
else {
    print "<h2>No image detected!</h2>";
    print qq{<p><a href="../lab07c.html">Try again</a></p>};
}

print qq{</div>};
print $q->end_html;
```

Screenshots:

Bed & Breakfast Reservation

First Name:

Last Name:

Street Address:

City:

Postal Code (A1A 1A1):

Province:

Select Province

Phone Number (10 digits):

4165551234

Email Address:

Postal Code (A1A 1A1):

Province:

Select Province

Phone Number (10 digits):
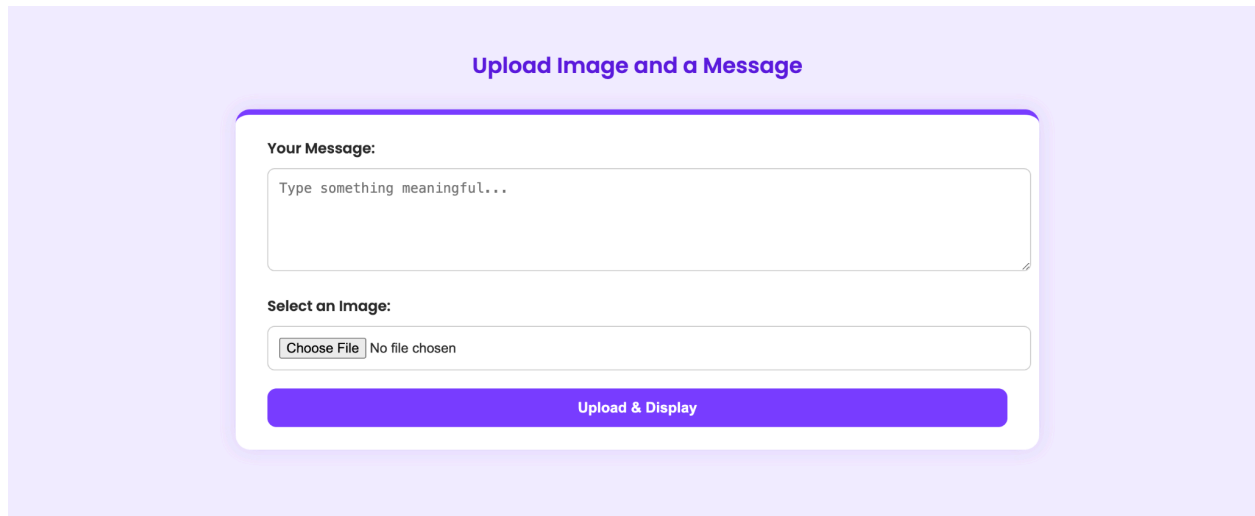
4165551234

Email Address:

name@example.com

Payment Method:

Select Payment Option

Submit Reservation

Part3:

Upload Image and a Message

Your Message:

```
Type something meaningful...
```

Select an Image:

Choose File | No file chosen

Upload & Display

Conclusion:

I ran into permission and file naming issues, but I figured them out after some testing. If I had to do it again id organize my files better from the start and double check permissions right after uploading, since that's what caused most of my errors.