

Table of Contents

Publishing on the Day.....	1
The three addresses	1
Where the file goes	2
The one idea worth writing down.....	2
Test it on your own machine FIRST	3
The upload.....	3
Your mistake breaks only your own page	4
The thirty-second fix.....	4
When the whole group site is down	5
Things that will go wrong	5
Before you leave, every lab, from now on.....	6

Publishing on the Day

Deployment Guide · Session 5 · Introduction to Computing

Keep this sheet. It is the same every Saturday from now until December, and it is the sheet the group leader holds while the eight of you are publishing.

Since Session 3 your address has not been a file on a disk. It is a **program**, running on a machine in a data centre, answering people who knock. This sheet is everything about living with that.

The three addresses

gNN.cic.rmlsystems.net	your group's homepage
gNN.cic.rmlsystems.net/convert	this week's group route
gNN.cic.rmlsystems.net/<yourfolder>/	YOUR program
gNN.cic.rmlsystems.net/<yourfolder>/page.html	YOUR hand-typed page

NN is your group number with a zero in front of it if it is one digit: g01 ... g10.

Your folder name is your lastname then your firstname, all lowercase, and nothing else. No spaces, no hyphens, no apostrophes, no accents, no full stops.

Student	Folder	Their address
Juan Dela Cruz, Group 1	delacruzjuan	g01.cic.rmlsystems.net/delacruzjuan/
Maria Santos, Group 3	santosmaria	g03.cic.rmlsystems.net/santosmaria/

Student	Folder	Their address
José Peña, Group 7	penajose	the accent comes out
Mary Rose O'Brien, Group 2	obrienmaryrose	the apostrophe comes out

Write yours on your worksheet now, before you touch FileZilla. Getting it wrong is the single most common reason a page does not appear, and the symptom is a 404 that looks like the server's fault.

Where the file goes

```

app/
├── index.py
├── static/cic-logo.jpg
└── people/
    ├── delacruzjuan/
    │   ├── index.py
    │   └── index.html
    └── santosmaria/
        ├── index.py
        └── index.html

```

← the GROUP's program. The leader only.
 ← already there. Leave it.
 ← Juan's program → /delacruzjuan/
 ← Juan's page →

/delacruzjuan/page.html

Two files, one folder, and the folder already exists with your name on it.

public_html is still on your account and **nothing in it is served**. Drop a file in there and you get no error, no warning and no change — the most confusing possible outcome. Before you drag, read the folder name on the right-hand side of FileZilla out loud. It must say app.

The one idea worth writing down

There is **no templates folder**, and there never will be one in this course. Everything is in index.py.

The group homepage is a block of text near the top of index.py, sent by render_template_string. A new group route is a line you write, and it returns a string:

```

@app.route("/convert")
def convert():
    rows = ""
    number = FIRST
    while number <= LAST:
        rows += "<tr><td>" + str(number) + "</td>"
        rows += "<td>" + f"{number:b}" + "</td></tr>"
        number += 1
    return "<h1>Our table</h1><table>" + rows + "</table>"

```

Read it aloud like this:

"When somebody asks for /convert, run this function. Whatever string it gives back is the page."

You decide the address. Change `"/convert"` to `"/our-table"`, save, upload, refresh: the page moved and no file was renamed.

Your own `index.py` is simpler still. It has no routes in it at all. It defines **one function called `page()` that returns a string of HTML**, and the group's program calls it for you:

```
STUDENT = "Juan Dela Cruz"
MY_NUMBER = 27
```

```
def page():
    return "<h1>" + STUDENT + "</h1><p>My number in binary is " +
f"{MY_NUMBER:b}" + "</p>"
```

That is the whole contract. Nothing else is required of you.

Test it on your own machine FIRST

Uploading a file to find out whether it works is the slow way round. Do this instead, every time:

1. Open your `index.py` in **IDLE**.
2. Press **F5**.
3. At the shell that appears, type:

```
print(page())
```

You get a wall of HTML. That is correct — that wall is your page. If instead you get a red error message, **read its last line**, fix that, and press F5 again.

Fixing it here takes ten seconds. Fixing it after the upload takes a minute and everybody watches.

The upload

FileZilla, exactly as in Session 3.

Box	What to type
Host	sftp://58.71.69.30
Username	your group username, from the slip
Password	your group password, from the slip
Port	22

Click **Quickconnect**, open app on the right-hand side, then drag:

app/index.py	← the leader only
app/people/<yourfolder>/index.py	← you
app/people/<yourfolder>/index.html	← you

Say yes to the overwrite. Watch the bar at the bottom say **Successful transfers: 1**.

Then refresh. That is the whole deployment.

There is no third step. No button, no command line, nobody to ask, nothing to switch on.

Your `index.py` is read again the moment its timestamp changes, so **nothing restarts and nobody waits for anybody**. Eight of you can upload in the same minute and none of you blocks the other seven. The leader's edit to the group `index.py` makes the program start itself again, which takes about two seconds — count to three before you decide it did not work.

If nothing changed, hard-refresh: Ctrl + F5. Nine times out of ten it is the browser showing you yesterday's copy, not the server being wrong.

Your mistake breaks only your own page

This matters and it is worth understanding rather than just believing.

If your `index.py` has an error in it, **your address shows you the traceback** — the real Python error, with the line number, on the page. The group homepage keeps working. The other seven people's pages keep working. Nobody has to wait for you and nothing you do this afternoon can take the group site down.

The one exception is the group's own `index.py`, which is why only the leader touches it.

The thirty-second fix

Your page is broken. Do this, in this order, and time yourself.

1. **Open your address.** Do not guess and do not ask. Look at it.
2. **Read the last line of the traceback.** Not the first. The last line names what went wrong, and the line above it names the line number in your file.
3. **Fix that line** in IDLE. Press F5 to check it.
4. **Upload. Refresh.**

That is the loop. You will run it a dozen times today and by Session 7 it will not frighten anybody.

The last line says	What you actually did
SyntaxError: invalid syntax	A missing :, a missing quote, or a bracket you

The last line says	What you actually did
	never closed. Look at the line above the one it points at.
IndentationError	You mixed the Tab key with spaces, or a line inside the loop is not lined up. Four spaces. Never Tab.
NameError: name 'x' is not defined	A spelling mistake, or you used a variable before you set it.
TypeError: can only concatenate str (not "int") to str	You added a number to a string. Wrap it: <code>str(number)</code> .
<i>the page never finishes loading</i>	A while loop with nothing changing inside it. Find the line that should be making the counter go up.

When the whole group site is down

Only the group `index.py` can do this, and only the leader edits it. You will see:

503 Service Unavailable

That means *nothing is running here* — the program will not start at all, so there is no traceback to show you in the browser. The traceback went to a file instead.

1. **Download `app/log.txt`** in FileZilla and open it in Notepad. The last few lines are Python telling you the file and the line number.
2. **Fix it. Upload again.**
3. **Count to six and refresh.** It comes back on its own.

If it is still down, `log.txt` now holds the *new* error. Read it again.

404 and 503 are not the same news. A 404 proves your program is alive and answering — it just does not know that address, so check the spelling in `@app.route(...)` and in your folder name. A 503 proves nothing is there at all. One is a typo in the address bar; the other is a typo in your code.

Things that will go wrong

What you see	What it means	What to do
A traceback on your page only	Your <code>index.py</code> has an error. Everyone else is fine.	The thirty-second fix, above.
404 Not Found at your own address	Your folder name is wrong, or the folder has no <code>index.py</code> in it.	Check the folder name against the rule: lastname, firstname, lowercase, nothing else.
<code>index.py</code> has no function called	You renamed it, misspelled it, or wrote	It must be exactly <code>def page():</code> , hard against the left margin, at the bottom of the

What you see	What it means	What to do
<code>page()</code>	it inside another function.	file.
<code>page()</code> returned <code>NoneType</code>	Your <code>page()</code> builds the string but never says <code>return</code> .	Add the <code>return</code> .
503 Service Unavailable	The group program is not running.	Leader reads <code>log.txt</code> .
Your edit does not show	Browser cache, or you uploaded to the wrong folder.	Ctrl + F5. Then check the transfer said <i>successful</i> . Then check it went into <code>app/people/<yourfolder>/</code> .
Uploaded, nothing changed, no error either	Almost certainly <code>public_html</code> , or the wrong person's folder.	Look at the right-hand side of FileZilla again.
Fine on your machine, broken live	You edited the copy on the Desktop and uploaded the old one.	It happens to everyone. Upload it.

The `index.py.txt` trap. Windows hides file extensions, so Notepad will happily save your file as `index.py.txt`. The server keeps running the old program and your changes appear nowhere. In the Save dialog set **Save as type: All Files** and type the name with `.py` on the end. If nothing you upload makes any difference, check this first — it catches almost everyone once.

Before you leave, every lab, from now on

- ☐ Open your address **on a computer that is not the one you built it on**
- ☐ No traceback on the page
- ☐ `.../<yourfolder>/page.html` opens too, and shows the same content
- ☐ Both links at the bottom of your page work — the twin, and the group homepage
- ☐ Your name is on your worksheet with both addresses written out in full
- ☐ Keep a copy of both files on your own USB or Drive. **The server is not your backup.**