

# PROGRAMMING

– Ajay Kumar R

# COURSE SCHEDULE

Week 1 - (1-hour programming for the first session)

- Hello, World!
- Variables and Types
- Lists
- Basic Operators

Week 2

- String Formatting
- Basic String Operations
- Conditions
- Loops

Week 3

- Functions
- Classes and Objects

Week 4

- Dictionaries
- Modules and Packages

Week 5 - Data Science Oriented

- Numpy Arrays
- Pandas Basics

Week 6

- Exception Handling
- Code Introspection

# SESSION

## Do's

- 1) Be punctual, log in on time
- 2) Read the syllabus
- 3) Introduce yourself and respect your peers
- 4) Set up your space, make sure it's quiet and uninterrupted
- 5) Test your tech

## Don't

- 1) Don't be afraid to speak up
- 2) No excuses for bad tech
- 3) Ignore additional online resources
- 4) Don't think you're doing it all alone
- 5) Don't get discouraged

# AGENDA

Getting to Know Each Other

ClassDojo - Intro

Brief Story of Python

Setting Up - Python

Learning Python Basics

Q/A and Feedback

# SESSION -1

```
>HELLO WORLD
```

```
>_
```

# HOW DID I BECOME A PROGRAMMER?





Boy or girl?

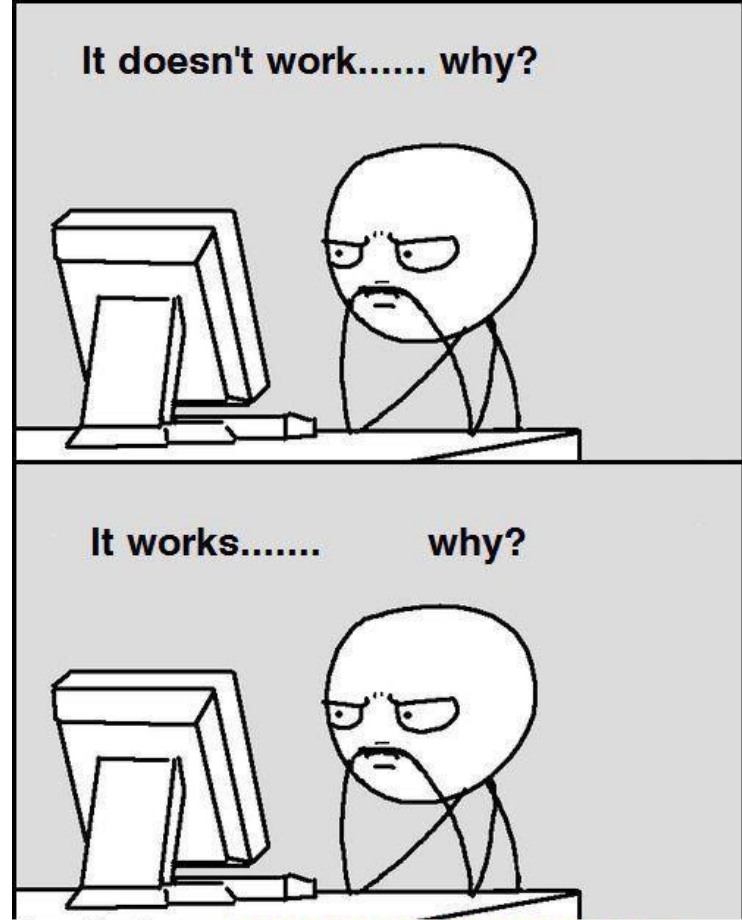
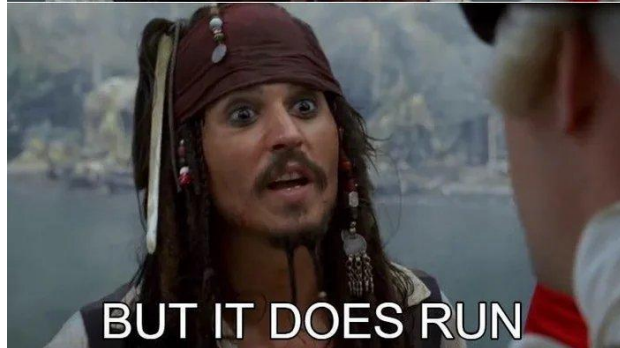
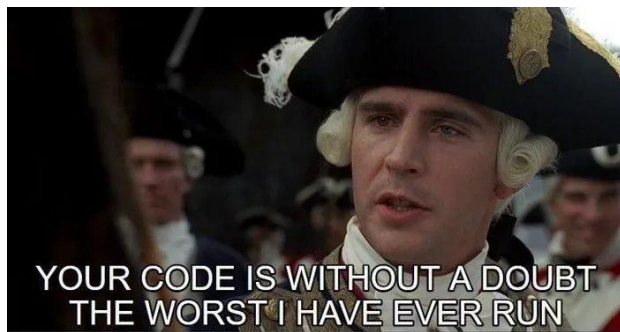


Hello, world



programmer  
it is







# AJAY KUMAR R

From Bangalore, India.

B.Tech. CSE - (NIT) National Institute of  
Technology, Puducherry, India.

Certified Data Scientist: INSOFE, Bangalore.

Interests: AI & ML

Hobbies: Netflix, Computer Games, Puzzles

Focus: Provide a fun way for kids to code



!false

it's funny because  
it's true.



Learn  
**programming**  
for **future work**



Learn  
**programming**  
to understand  
**programming jokes**

# INTRODUCE YOURSELF

“i'm Batman”

- Batman



YOUR NAME

WHERE YOU ARE FROM

YOUR CURRENT SCHOOL

YOUR HOBBIES

YOUR FAVOURITE SUPERHERO



# GETTING INTO CLASSROOM



ClassDojo



# ACTIVITY TIME - FOR STUDENTS

Open [ClassDojo](#) in your browser.

Join as Student

Choose your Avatar

Hand in your signature

Upload your first classroom selfie

Make a Journal Entry

WHAT IS THE FIRST  
THING THAT COMES TO  
YOUR MIND, WHEN  
YOU HEAR THE WORD





IS IT THE **FEROCIOUS SNAKE?**



WHILE PYTHON(SNAKE) IS THE  
DANGEROUS HOSTILE CREATURE.

OR AN **INTERESTING  
PROGRAMMING LANGUAGE?**



PYTHON(PROGRAMMING LANGUAGE) ON  
THE OTHER HAND IS THE FRIENDLIER ONE.

DO YOU KNOW WHO  
INVENTED PYTHON?

# GUIDO VAN ROSSUM

Dutch Programmer

Initially released in 1991

He also worked for



ARE YOU  
WONDERING WHY IS  
IT NAMED PYTHON?

While implementing Python,  
Van Rossum was also reading  
"Monty Python's Flying Circus"  
He got inspired by the series and  
Named it **Python**.



# SOME REAL LIFE APPLICATIONS

The Netflix logo, consisting of the word "NETFLIX" in a bold, red, sans-serif font, centered on a solid black rectangular background.

Over 75% of what you watch is recommended by Netflix.

Facebook is using Machine Learning to tag in posts and images.

The Facebook logo, featuring the word "facebook" in a white, lowercase, sans-serif font, centered on a solid blue rectangular background.The Amazon logo, featuring the word "amazon" in a dark blue, lowercase, sans-serif font, with a curved orange arrow underneath it pointing from the 'a' to the 'z'.

Alexa is Amazon's Virtual Personal Assistant for speech recognition, etc..





# WHY LEARN PYTHON?



# EASY TO LEARN, READ, AND USE

## C#

```
public class Program
{
    0 references
    public static void Main()
    {
        Console.WriteLine("Hello World!");
    }
}
```

## Python

```
print("Hello World")
```

# PROPER PROGRAMMING PRACTICES ARE BUILT-IN

## JavaScript

```
(function(W,X,u){'use strict';function z(b){return function(){var a=arguments[0],c,a=["*(b?b+":"")+a+""]  
http://errors.angularjs.org/1.2.28/"+(b?b+"/":"")+a;for(c=1;  
c<arguments.length;c++)a=a+(1==c?"?":"&")+("p"+(c-1)+"=""  
+encodeURIComponent("function"==typeof arguments[c]?arguments[c]  
.toString().replace(/\ \{([^\S\S])\S+/, ""):"undefined"==typeof arguments[c]  
"undefined":"string"!=typeof arguments[c]?JSON.stringify(arguments[c])  
:arguments[c]);return Error(a)}}function $a(b){if(null==b||!Ja(b))  
return!1;  
var a=b.length;return 1==b.nodeType&&a?0:G(b)||L(b)||0==a||  
"number"==typeof a&&0<a&&a-1 in b?function r(b,a,c){var d;if(b){if(N(b)  
}for(d in b)"prototype"==d||("length"==d||"name"==d||b.hasOwnProperty&  
!b.hasOwnProperty(d))||a.call(c,b[d],d);else if(L(b)||$a(b))for(d=0;  
d<b.length;d++)a.call(c,b[d],d);else if(b.forEach&&b.forEach!=r)  
b.forEach(a,c);else for(d in b)b.hasOwnProperty(d)&&a.call(c,b[d],d);  
return b?function Xb(b){var a=[],c;for(c in b)b.hasOwnProperty(c)&&  
a.push(c);return a.sort()}function Sc(b,  
a,c){for(var d=Xb(b),e=0;e<d.length;e++)a.call(c,b[d[e]],d[e]);return  
b?function Yb(b){return function(a,c){b(c,a)}}function Ib(){for(var  
b=na.length,a;b;){b--;a=na[b].charCodeAt(0);if(S7==a)return na[b]="A"  
na.join("");if(90==a)na[b]="0";else return na[b]=String.fromCharCode(a
```

## Python

```
from flask import Flask, render_template, request, redirect, session  
app = Flask(__name__)  
app.secret_key = "PythonIsAwesome"  
  
@app.route('/')  
def index():  
    try:  
        session['counter'] += 1  
    except:  
        session['counter'] = 0  
    return render_template('index.html')  
  
@app.route('/add', methods = ["POST"])  
def add():  
    try:  
        session['counter'] += 2  
    except:  
        session['counter'] = 0  
    return render_template('index.html')  
  
@app.route('/reset', methods = ["POST"])  
def reset():  
    session['counter'] = 0  
    return redirect('/')  
  
app.run(debug=True)
```

# PYTHON IS NOT THAT COMPLEX

Python is kid Friendly

It's Easy to Set up

Less Syntax Memorization

The Demand for Python is Continually Growing

Data Science, Machine Learning, Web Development, and Automation

Python is Here to Stay

# Setting Up



# THINGS NEEDED



Download for [Mac Users](#).

Download for [Windows Users](#).

Download for [Linux Users](#).







THANK YOU

[GitHub Link](#)

# CODING COMIC OF THE DAY

