**Cheat Sheet**

**Intro to Programming with Python**

**Software**

Software is a set of instructions to the hardware.

**Programming**

Programming means writing the instructions to create a software.

**Code**

The instructions that we write to create software is called **Code**.

**Syntax**

Similar to Grammar rules in English, Hindi, each programming language has a unique set of rules. These rules are called the **Syntax** of a Programming Language.

Why Python

Python is an easy to learn, powerful programming language. With Python, it is possible to create programs with minimal amount of code. Look at the code in Java and Python used for printing the message **"Hello World"**

**Java:**

1

2

3

4

5

class Main {

public static void main(String[] args) {

System.out.println("Hello World");

}

}

JAVA

**Python:**

print("Hello World")

PYTHON

Applications of Python

Python is a versatile language which has applications in almost every field

* Artificial intelligence (AI)
* Machine Learning (ML)
* Big Data
* Smart Devices/Internet of Things (IoT)
* Cyber Security
* Game Development
* Backend Development, etc.

Career Opportunities

Python developers have plenty of opportunities across the world

* DevOps Engineer
* Software Developer
* Data Analyst
* Data Scientist
* Machine Learning (ML) Engineer
* AI Scientist, etc.

Hello World Program in Python

Here is a simple Python code that you can use to display the message **"Hello World"**

**Code**

1

print("Hello World!")

PYTHON

Hello World!

Possible Mistakes

Possible mistakes you may make while writing Python code to display the message "Hello World"

* Spelling Mistake in print1

prnt("Hello World!")

PYTHON

* Uppercase ‘P’ in Print

1

Print("Hello World!")

PYTHON

* Missing quotes1

print(Hello World!)

PYTHON

* Missing parentheses1

print("Hello World!"

PYTHON

Printing Without Quotes

If we want to print the numerical result of 2 + 5, we do not add quotes.

**Code**

1

print(2 + 5)

PYTHON

**Output**

7

If we want to print the exact message "2 + 5", then we add the quotes.

**Code**

Calculations with python

**Addition**

Addition is denoted by

+

sign. It gives the sum of two numbers.

**Code**

1

2

print(2 + 5)

print(1 + 1.5)

PYTHON

**Output**

7

2.5

**Subtraction**

Subtraction is denoted by

-

sign. It gives the difference between two numbers.

**Code**

1

print(5 - 2)

PYTHON

**Output**

3

**Multiplication**

Multiplication is denoted by

\*

sign.

**Code**

2.5

**Division**

Division is denoted by

/

sign.

**Code**

1

2

print(5 / 2)

print(4/2)

PYTHON

**Output**