



# Introduction to Python

`while (!(succeed = try()));`

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# About Me

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- **B.Tech in Electronics and Communication Engineering**, NIT Arunachal Pradesh, 2014-2018
- **Ph.D Scholar in Electrical Engineering**, IIT Gandhinagar, 2018 - Present





# Acknowledgement

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# Goal

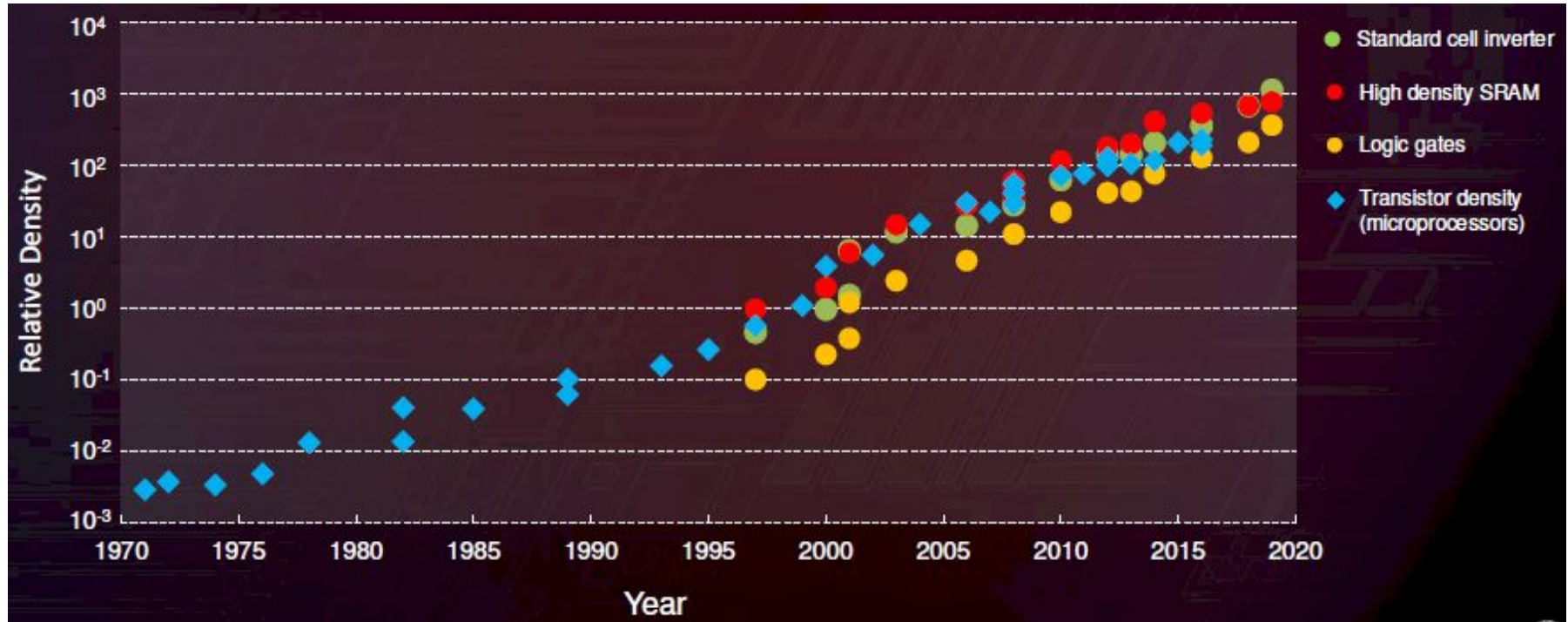


**nanoDC should speak in one language!**

# Basic Needs of Life



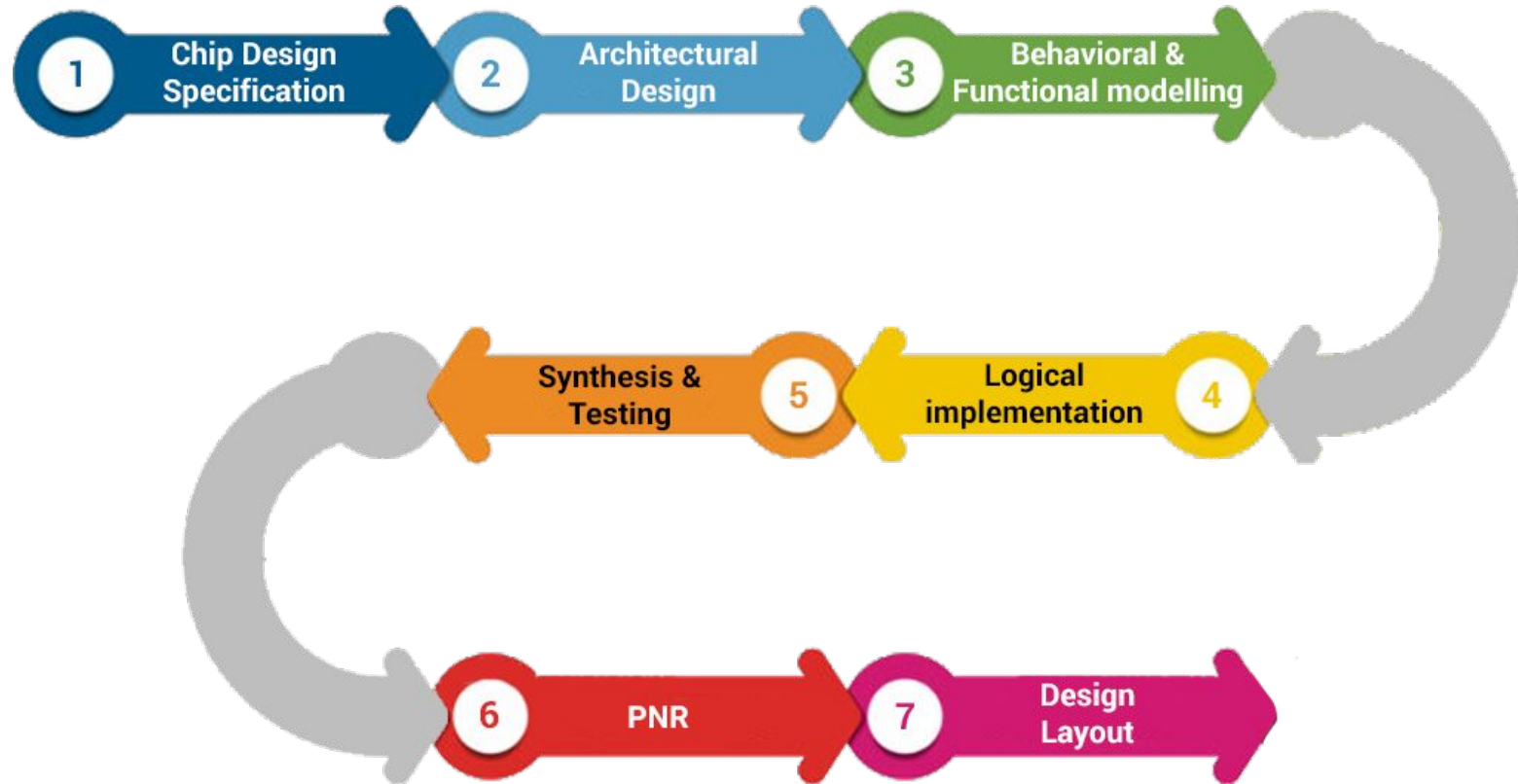
# Moore's Law



Source: TSMC



# RTL to GDSII



## Features of



# Python

**Easy**

**01**

**Extensible**

**07**

**Expressive**

**02**

**Embeddable**

**08**

**Free and  
Open Source**

**03**

**Interpreted**

**09**

**High-Level**

**04**

**Large Standard  
Library**

**10**

**Portable**

**05**

**GUI  
Programming**

**11**

**Object  
Oriented**

**06**

**Dynamically  
Typed**

**12**

# What you can do with python?



**Programmers are more important than  
programs**



# import this



The Zen of Python, by Tim Peters

Beautiful is better than ugly.

Explicit is better than implicit.

Simple is better than complex.

Complex is better than complicated.

Flat is better than nested.

Sparse is better than dense.

Readability counts.

Special cases aren't special enough to break the rules.

Although practicality beats purity.

Errors should never pass silently.

Unless explicitly silenced.

In the face of ambiguity, refuse the temptation to guess.

There should be one-- and preferably only one --obvious way to do it.

Although that way may not be obvious at first unless you're Dutch.

Now is better than never.

Although never is often better than \*right\* now.

If the implementation is hard to explain, it's a bad idea.

If the implementation is easy to explain, it may be a good idea.

Namespaces are one honking great idea -- let's do more of those!

# Where to practice?

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<https://www.hackerrank.com/dashboard>



# Reference

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- <https://github.com/rajathkmp/Python-Lectures>
- <https://github.com/jupyter/jupyter/wiki/A-gallery-of-interesting-Jupyter-Notebooks>
- <https://github.com/zhiyzuo/python-tutorial>
- <https://gist.github.com/kenjyco/69eeb503125035f21a9d>
- [https://github.com/mGalarnyk/Python\\_Tutorials](https://github.com/mGalarnyk/Python_Tutorials)
- <https://github.com/jerry-git/learn-python3>
- <https://www.tutorialspoint.com/python3/index.htm>

# Day 1

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- **Motivation**
- **Installing Jupyter Lab**
- Some Best Coding Practice
- Python Basics
  - Numbers
  - Strings
  - Conditionals
  - Loops



- Python Basics
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  - Loops
  - Lists
  - Dictionaries
  - Sets

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  - Numbers
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  - Dictionaries
  - Functions
  - Modules
  - Exception Handling