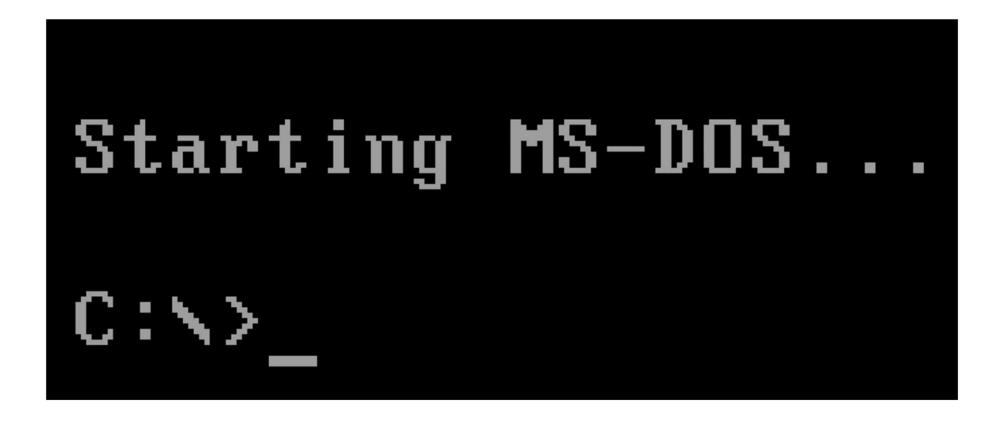
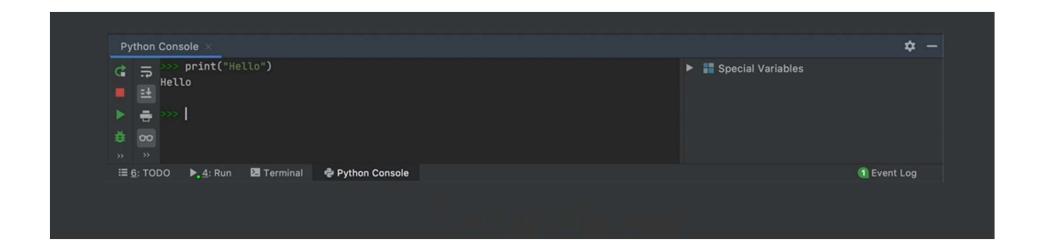
Programming for Al

Abdul Haseeb BS(AI)-IV

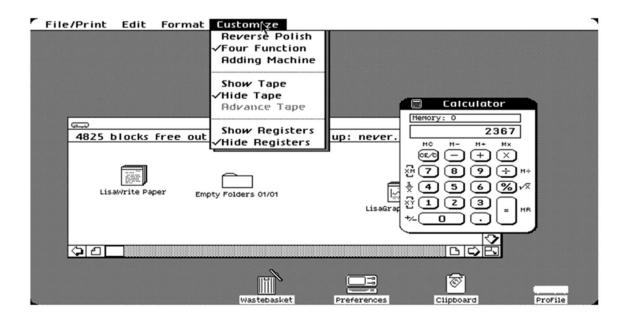
Interactions in past



Similar to Python console



Mac Lisa

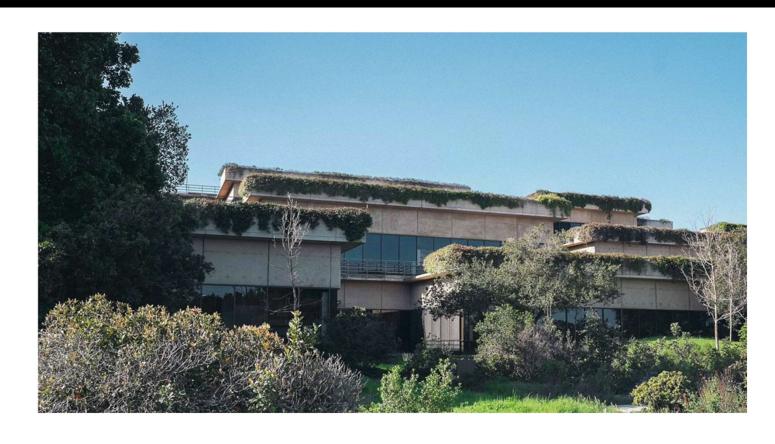


Windows 95



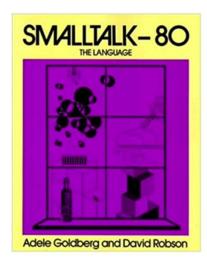
The main "copying" that went on relative to Steve and me is that we both benefited from the work that Xerox Parc did in creating graphical interface - it wasn't just them but they did the best work. Steve hired Bob Belville, I hired Charles Simonyi. We didn't violate any IP rights Xerox had but their work showed the way that led to the Mac and Windows.

The First Ones Actually



Also Created..







OOP GUI



Also Created, The Mouse

Let's come Back



Graphical User Interface

Install Tkinter

Tkinter is part of python standard library

No need to install it separately

Create a new Window

import tkinter

window=tkinter.Tk()

Keep the window on screen

window.mainloop()

Looping should be at the end

```
import tkinter
window = tkinter.Tk()

window.mainloop()
```

Setting the title

window.title("My First Program")



window.minsize(width=500, height=500)

Creating a Label and Adding it on screen



my_label=tkinter.Label(text="lam
a Label", font=("Arial",24,"bold")



my_label.pack()

Changing the Alignment

mylabel.pack(side="left/right/bottom/t op")

Default Arguments

Arguments with Default Values

```
def my_function(a=1, b=2, c=3):
    #Do this with a
    #Then do this with b
    #Finally do this with c
```

*args

def add(*args):
 sum=0
 for i in args:
 sum=sum+l
 return sum

**kwargs

- def calc(n, **kwargs)
- It's like a dictionary
- calc(3, add=3, multiply=4)