**Simple Python Programs**

**#Program 1**

# input and output

name = raw\_input("what is your name? ")

print "hello", name

**#Program 2**

# variables and sums

name = raw\_input("what is your name? ")

print "hello", name

age = int(raw\_input("How old are you? "))

newage = age + 1

print "next year you will be ", newage

**#Program 3**

# selection (making decisions)

name = raw\_input("What is your name? ")

print "Hello", name

age = int(raw\_input("How old are you? "))

newage = age + 1

print "Next year you will be ", newage

if age>=5 and age<19:

print "You are still in school"

elif age < 5:

print "You have not started school yet?"

elif age >= 19:

print "You are probably out of school now?"

**#Program 4**

# iteration (looping) with selection (conditions)

again = True

while again:

name = raw\_input("What is your name? ")

print "Hello", name

age = int(raw\_input("How old are you? "))

newage = age + 1

print "Next year you will be ", newage

if age>=5 and age<19:

print "You are still in school"

elif age < 5:

print "You have not started school yet?"

elif age >= 19:

print "You are probably out of high school now?"

answer = raw\_input("Again (y/n)?")

if answer != 'y':

again = False

**#Program 5**

# iteration (loops) with counting

again = True

while again:

name = raw\_input("What is your name? ")

print "Hello", name

age = int(raw\_input("How old are you? "))

newage = age + 1

print "Next year you will be ", newage

if age>=5 and age<19:

print "You are still in school"

elif age < 5:

print "You have not started school yet?"

elif age >= 19:

print "You are probably out of high school now?"

for a in range(1,age+1):

print "Happy birthday number ", a

answer = raw\_input("Again (y/n)?")

if answer != 'y':

again = False

**#Program 6**

# modules (functions)

age = 0

def checkAge():

if age>=5 and age<19:

print "you are still at school"

elif age < 5:

print "you have not started school yet?"

elif age >= 19:

print "you are probably working now?"

again = True

while again:

name = raw\_input("what is your name? ")

print "Hello", name

age = int(raw\_input("How old are you? "))

newage = age + 1

print "Next year you will be ", newage

checkAge()

answer = raw\_input("Again (y/n)? ")

if answer != 'y':

again = False

**#Program 7**

# timing/delays

import time

for a in range(0,10):

print a

time.sleep(1)

**#Program 8**

# graphics

import pygame, time, sys, random

from pygame.locals import \*

pygame.init()

fpsClock = pygame.time.Clock()

screen = pygame.display.set\_mode((500, 500))

pygame.display.set\_caption("graphics example")

black = pygame.Color(0, 0, 0)

red = pygame.Color(255, 0, 0)

screen.fill(black)

pygame.draw.rect(screen, red, Rect(10, 10, 20, 20))

pygame.display.flip()

while True:

print "waiting"

fpsClock.tick(20)

time.sleep(1)

**#Program 9**

# graphics

import pygame, time, sys, random

from pygame.locals import \*

pygame.init()

fpsClock = pygame.time.Clock()

screen = pygame.display.set\_mode((500, 500))

pygame.display.set\_caption("graphics example")

black = pygame.Color(0, 0, 0)

red = pygame.Color(255, 0, 0)

def draw():

screen.fill(black)

for a in range(0,300):

x = random.randrange(1,50)

y = random.randrange(1,50)

pygame.draw.rect(screen, red, Rect(x\*10, y\*10, 10, 10))

pygame.display.flip()

while True:

draw()

fpsClock.tick(30)