Lab 04: Intro to Python, Solution

The following code is just one solution to the exercises, there are many other possibilities to implement the address book.

```python
# Use the following template:
# MIT AITI Indonesia Summer 2013
# File: Python1lab.py
# Below are templates for your answers to Lab 4

# INSTRUCTIONS: Write your complete name in student_name and age in student_age
# Complete the implementation of functions and classes as described in the handout.
# Delete the pass statements below and insert your own code.
student_name = 'Markus von Rudno'
student_age = 22


def fib(n):
  if n == 0:
    return 0
  elif n == 1:
    return 1
  else:
    return fib(n-1) + fib(n-2)

fiblut = {0:0,1:1}
def fib2(n):
  if type(n) is int and n >= 0:
    if n not in fiblut.keys():
      fiblut[n] = fib2(n-1)+fib2(n-2)
    return fiblut[n]

def zellers():
  # ask the user of their first and last names
  first_name = raw_input('Enter your first name: ')
  last_name = raw_input('Enter your last name: ')

  # ask the user for their date of birth
  print 'Enter your date of birth: '
  day = input('Day? ')
  month = input('Month? (Mar: 1, Apr: 2, May: 3, Jun: 4, Jul: 5, Aug: 6, Sep: 7, Oct: 8, Nov: 9, Dec: 10 , Jan: 11, Feb: 12) ')
```

```python
    year = input('Year? (If born in Jan or Feb, enter previous year)')

    # find the century and year
    century = year/100
    year = year % 100

    # apply zeller's algorithm
    W = (13 * month - 1) / 5
    X = year / 4
    Y = century / 4
    Z = W + X + Y + day + year - 2 * century
    R=Z%7

    # print out the result
    print first_name, last_name, 'was born on day', R, 'of the week'
    print "(0 means Sunday, 1 means Monday, ..., 6 means Saturday)"


def rock_paper_scissors():
    # ask the user for the players' choice of object
    player1 = raw_input('Player 1? ')
    player2 = raw_input('Player 2? ')

    if (((player1 != 'rock') and (player1 != 'paper') and (player1 != 'scissors')) or ((player2 !=
'rock') and (player2 != 'paper') and (player2 != 'scissors'))):
        # make sure the object name entered is valid
        print 'This is not a valid object selection.'
    elif player1 == player2: # if both players select the same object # the game is a tie
        print 'The game is a tie.'
    elif ((player1 == 'rock' and player2 == 'scissors') or (player1 == 'scissors' and player2 ==
'paper') or (player1 == 'paper' and player2 == 'rock')):
        print 'Player 1 wins.'
    else:
        print 'Player 2 wins.'
```