

```
sudo mysql -u root -p
CREATE DATABASE exampledb;
CREATE USER 'exampleuser'@'localhost' IDENTIFIED BY 'pimylifeup';
CREATE TABLE Books(Id INTEGER PRIMARY KEY, Title VARCHAR(100),
Author VARCHAR(60));

INSERT INTO Books(Title, Author) VALUES (1, 'War and Peace',

'Leo Tolstoy');
SELECT * FROM Books;

UPDATE Books SET Author='Lev Nikolayevich Tolstoy' WHERE Id=1;

DELETE FROM Books2 WHERE Id=1;
```

**a) Write a program to demonstrate working with tuples in python**

**Create an empty Tuple in Python**

my\_tuple = (); here the variable named my\_tuple is the name of the tuple.

**Create a Tuple with Items in Python**

my\_tuple = ("me", "my friend", "my brother", "my sister");or

tuple1 = ("python", "tuple", 1952, 2323, 432);

tuple2 = (1, 2, 3, 4, 5);

tuple3 = ("a", "b", "c", "d",  
"e");ex:

```
# Python Tuple Example
```

```
print("Creating an empty
```

```
tuple...");my_tuple = ();
```

```
print("An empty tuple, my_tuple is created  
successfully.");if not my_tuple:
```

```
    print("The tuple, my_tuple, contains no any  
item.");print("Inserting some items to the tuple...");
```

```
my_tuple = ("me", "my friend", "my brother", "my  
sister");print("\nPrinting the tuple...");
```

```
print(my_tuple);
```

```
print("\nNow printing each item in the  
tuple...");for item_in_tuple in my_tuple:
```

```
    print(item_in_tuple);
```

**b) Write a program to demonstrate working with dictionaries in python**

How to create a dictionary

```
# empty
dictionary
my_dict = {}
# dictionary with integer
keys my_dict = {1: 'apple',
2: 'ball'} # dictionary with
mixed keys
my_dict = {'name': 'John', 1: [2, 4,
3]} # using dict()
my_dict = dict({1:'apple', 2:'ball'})
# from sequence having each item as a
pair my_dict = dict([(1,'apple'), (2,'ball')])
```

How to access elements from a

```
dictionary my_dict = {'name': 'Jack',
'age': 26}
# Output: Jack
print(my_dict['name'])
# Output: 26
print(my_dict.get('age'
))
# Trying to access keys which doesn't exist throws
error # my_dict.get('address')
# my_dict['address']
```

How to change or add elements in a

dictionary

```
my_dict = {'name': 'Jack', 'age':  
26}  
# update value  
my_dict['age'] = 27  
# Output: {'age': 27, 'name':  
'Jack'}  
print(my_dict)  
# add item  
my_dict['address'] = 'Downtown'  
# Output: {'address': 'Downtown', 'age': 27, 'name':  
'Jack'}  
print(my_dict)
```

**c) Write a python script that prints prime numbers less than 20**

```
# Python program to display all the prime numbers upto
n# Setting the initial value with 1
Starting_value = 1
# Taking input from the user
n = int(input("Enter the number: "))
print("Prime numbers between", Starting_value, "and", n,
"are:")
for num in range(Starting_value, n + 1):
    if num > 1:
        for i in range(2,
            int(num/2)+1):
            if (num % i)
                == 0:
```

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```
        break
    else:
        print(num)
```

```
/*  
  Blink  
  Turns on an LED on for one second, then off for one second, repeatedly.  
*/  
  
// the setup function runs once when you press reset or power the board  
  
void setup() { // initialize digital pin 13 as an output.  
  pinMode(2, OUTPUT);  
}  
  
// the loop function runs over and over again forever  
  
void loop() {  
  digitalWrite(2, HIGH); // turn the LED on (HIGH is the voltage level)  
  delay(1000); // wait for a second  
  digitalWrite(2, LOW); // turn the LED off by making the voltage LOW  
  delay(1000); // wait for a second  
}
```