Q1

Assignexample1.py

```python
x=int(input("x: "))
y=int(input("y: "))

print("x += y: x = {0} and y = {1}".format(x+y,y))
print("x -= y: x = {0} and y = {1}".format(x-y,y))
print("x *= y: x = {0} and y = {1}".format(x*y,y))
print("x /= y: x = {0} and y = {1}".format(x/y,y))
print("x **= y: x = {0} and y = {1}".format(x**y,y))
print("x //= y: x = {0} and y = {1}".format(x//y,y))
print("x %= y: x = {0} and y = {1}".format(x%y,y))
print("x = y: x = {0} and y = {1}".format(y,y))
```

Q2

Assignexample2.py

```python
# Assignment Operators =, +=, -=, *=
x=int(input("x: "))
y=int(input("y: "))
print("x = y: {0}".format(y))
print("x += y: {0}".format(x+y))
print("x -= y: {0}".format(x-y))
print("x *= y: {0}".format(x*y))
```

Q3

Assignexample3.py

```python
# Assignment Operators  /= , %=, **=, //=
a = int(input("x: "))
b = int(input("y: "))
print('x /= y:' , a/b)
print ('x %= y:' , a%b)
print ('x **= y:' , a**b)
print ('x //= y:' , a//b)
```

Q1

- [x] In (NOT) ~ Bits that are 0 become 1, and those that are 1 become 0.
- [ ] Numbers can be used in only one form.
- [ ] Bitwise Operators take Two operands and operate them together.

Q2

Bitopexample2.py

```python
#Program to illustrate bit wise operators >>, <<
x=int(input("x: "))
y=int(input("y: "))
print("{0} >> {1} is {2}".format(x,y,x>>y))
print("{0} << {1} is {2}".format(x,y,x<<y))

```

Q3

Bitopexample3.py

```python
#Program to illustrate the bitwise operators &, |
x=int(input("x: "))
y=int(input("y: "))

print("{0} & {1}: {2}".format(x,y,x&y))
print("{0} | {1}: {2}".format(x,y,x|y))
```

Q4

- [x] One's complement converts 0's into 1's and 1's into 0's.
- [ ] One's complement is represented with @ symbol.
- [ ] If the binary number is 100110 then its one's complement is 011101.
- [x] One's complement of the short int value 2 is 11111101.

Q5

the

Bitopexample4.py

```
#Program to illustrate bitwise operators ~, ^
x=int(input("x: "))
y=int(input("y: "))

print("~ {0}: {1}".format(x,~x))
print("{0} ^ {1}: {2}".format(x,y,x^y))
```

Q6

print

Bitopexample1.py

```
x=int(input("x: "))
y=int(input("y: "))

print("{0} >> {1} is {2}".format(x,y,x>>y))
print("{0} << {1} is {2}".format(x,y,x<<y))
print("{0} & {1} is {2}".format(x,y,x&y))
print("{0} | {1} is {2}".format(x,y,x|y))
print("~ {0} is {1}".format(x,~x))
print("{0} ^ {1} is {2}".format(x,y,x^y))
```

Q7

TwoCompliment.py

```
1  x=int(input("num1: "))
2  y=int(input("num2: "))
3
4  print("difference: {0}".format( ((~y)+1)  -  ((~x)+1)))
```