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Holiday Homework – 2020
Sub : Informatics Practices

Do the Following programs

1. Program to find the simple interest based upon number of years. If number of years is more than 12 rate of interest is 10 otherwise 15.
2. Write a program to input any choice and to implement the following. Choice Find
 1. Area of square
 2. Area of rectangle
 3. Area of triangle
3. Write a program to input any number and to find reverse of that number.
4. Write a program to print multiplication of a number given by the user.
5. Write a program to find all prime numbers up to given number.
6. Write for statement to print the following series:
 - a) 10,20,30.....300
 - b) 105,98,91,....7
7. Write the while loop to print the following series:
 - a) 5,10,15,...100
 - b) 100,98,96,...2
8. Write program to input any number and to print all factors of that number.
9. Write a program to input any number and to check whether given number is Armstrong or not.
(Armstrong 1,153 etc. $1^3 = 1$, $1^3+5^3+3^3 =153$)
10. Write a program to input employee no, name basic pay and to find HRA, DA and netpay.

Basic pay	Hra	Da
>100000	15%	8%
<=100000&>50000	10%	5%
<=50000	5%	3%

What will the output of the following code.

1. Write the output from the following code:

- a)

```
x = 10
y = 20
if (x>y):
    print x+y
else:
    print x-y
```
- b)

```
print "Inspirational stories \n for \t Children"
```
- c)

```
s = 0
for I in range(10,2,-2):
    s+=I
print "sum=",s
```
- d)

```
n = 50
i = 5
s = 0
while i<n:
    s+=i
    i+=10
print "i=",i
print "sum=",s
```
- e)

```
y = 2000
if (i%4==0):
    print "Leap Year"
else:
    print "Not leap year"
```

How many times are the following loop executed?

a) `for a in range(100,10,-10):`

`print a`

b) `i = 100`

`while(i<=200):`

`print i`

`i += 20`

c) `for b in (1,10):`

`print b`

d) `i = 4`

`while (i>=4):`

`print i`

`i + = 10`

f) `i=2`

`while (i<=25)`

`print i`

Rewrite the following for loop into while loop:

a) `for a in range(25,500,25):`

`print a`

b) `for a in range(90,9,-9):`

`print a`

Rewrite the following while loop into for loop:

a) `i = 10`

`while i<250:`

`print i`

`i = i+50`

b) `i=88`

`while(i>=8):`

`print i`

`i- = 8`

Find the errors from the following code.

- a. `T=[a,b,c]`
`Print T`
- b. `for i in 1 to 100:`
`print I`
- c. `i=10;`
`while [i<=n]:`
`print i`
`i+=10`
- d. `if (a>b)`
`print a:`
`else if (a<b)`
`print b:`
`else`
`print "both are equal"`

Find the output from the following code:

```
L=[100,200,300,400,500]
L1=L[2:4]
print L1
L2=L[1:5]
print L2
L2.extend(L1)
print L2
```

- # What is the use of List?
- # How Tuples are useful? Explain with example.
- # What do u understand by mutable and immutable types of data?