

## palindrome.py:

```
#!/usr/bin/python3

value = input("Enter a string: ")

if value == value[::-1]:
    print("is a palindrome")
else:
    print("is NOT a palindrome")
```

## divisors.py:

```
#!/usr/bin/python3

num = int(input("Enter a number: "))
print("Divisors:")

for x in range(1, num + 1):
    if num % x == 0:
        print(x)
```

## rps.py:

```
#!/usr/bin/python3

import random

moves = ["rock", "paper", "scissors", "r", "p", "s"]

machine = moves[random.randint(0, len(moves)/2 - 1)]

move = input("Enter a move: ")
while move not in moves:
    print("invalid move, try again.")
    move = input("Enter a move: ")

if (move == "rock" or move == "r") and (machine == "scissors" or machine == "s"):
    print("you won")
elif (move == "rock" or move == "r") and (machine == "paper" or machine == "p"):
    print("you lost")
elif (move == "scissors" or move == "s") and (machine == "paper" or machine == "p"):
    print("you won")
elif (move == "scissors" or move == "s") and (machine == "rock" or machine == "r"):
    print("you lost")
elif (move == "paper" or move == "p") and (machine == "rock" or machine == "r"):
    print("you won")
elif (move == "paper" or move == "p") and (machine == "scissors" or machine == "s"):
```

```

        print("you lost")
else:
    print("tie")

print("machine move = " + machine)

```

## A7:

```

#!/usr/bin/python3

import sys

def test(x):
    return -1000 <= int(x) <= 1000

for x in sys.stdin:
    output = filter(test, x.split())
    for v in output:
        print(v, end=" ")
    print()

```

## A8:

```

#!/usr/bin/python3

import os, re, sys

ccpat = r"\d{4}-\d{4}-\d{4}-(\d{4})"
cards = []

for filename in sys.argv[1:]:
    if not os.path.exists(filename):
        print("ERROR: file: '%s' cannot be opened" % filename, file=sys.stderr)
        continue

    with open(filename, "r") as infile:
        for line in infile:
            for i in re.finditer(ccpat, line):
                cards.append(i.group(0))
            print(re.sub(ccpat, r"XXXX-XXXX-XXXX-\1", line), end="")

cards.sort()
for ccnum in cards:
    print(ccnum)

```

## lists.py:

```
#!/usr/bin/python3

a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]
b = [1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

for x in a:
    if x in b:
        print(str(x), end=" ")
print()
```

## lists2.py:

```
#!/usr/bin/python3

import random

seen = []
a = []
b = []

a_size = random.randint(8,15)
b_size = random.randint(8,15)

for x in range(1,a_size):
    a.append(random.randint(0,20))

for x in range(1,b_size):
    b.append(random.randint(0,20))

a.sort()
b.sort()
print("list a = " + str(a))
print("list b = " + str(b))

for x in a:
    if x in b:
        if x not in seen:
            print(str(x), end=" ")
            seen.append(x)
print()
```