BUG SQUASHERS

FIND THE ADDRESS SPACE, FIRST ADDRESS, LAST ADDRESS USING SUBNETTING IN CIDR :

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AIM:

To write a python program to calculate first address , last address and the address space of the given IP address.

PROCEDURE:

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Step1:Import ipaddress module and math module.
Step2:Get the IP address and prefix number.
Step3:Split the IP address and prefix number.
Step4:Find the Address space using the formula 2^(32-prefix number).
Step5:Using IPV4 network, list of all addresses from first to last are stored in array.
Step6:Print n[0] and n[-1] to get the first and last address.

PROGRAM:

*1818128_SUBNETTING.py - C:/Users/Shanthi Ponnusamy/AppData/Local/Programs/Python/Python38-32/1818128_SUBNETTING.py

File Edit Format Run Options Window Help

```
# FIND ADDRESS BLOCK, FIRST ADDRESS AND LAST ADDRESS:

import ipaddress  # IMPORT IPADDRESS
import math       # IMPORT MATH MODULE

# GET THE IP ADDRESS
ip=input("Enter the ip address:")

# IT SPLITS THE IP ADDRESS AND THE MASK
i=ip.split("/")
p=i[1]
l=32-int(p)

# FIND THE ADDRESS SPACE WITH THIS FORMULA
val=math.pow(2,int(l))
n=ipaddress.IPv4Network(ip)

# ASSIGN FIRST AND THE LAST ADDRESS
first,last=n[1],n[-1]
print("ADDRESS BLOCK",int(val)) # PRINT THE BLOCK
print("FIRST ADDRESS",first)    # PRINT THE FIRST ADDRESS
print("LAST ADDRESS",last)      # PRINT THE LAST ADDRESS
```

OUTPUT:

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (I
ntel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Shanthi Ponnusamy/AppData/Local/Programs/Python/Python38-32
/1818128_SUBNETTING.py
Enter the ip address:196.1.24.0/27
ADDRESS BLOCK 32
FIRST ADDRESS 196.1.24.1
LAST ADDRESS 196.1.24.31
>>>
```

RESULT:

Thus the python program to calculate first address , last address and the address space of the given IP address was executed successfully.