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EXPERIMENT NO. 2

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BATCH-C

AIM:- OPEN SOURCE DEVELOPMENT; DEMOGRAPHICS
OPEN SOCIOLOGY, PSYCHOLOGY OF OPEN
SOURCE DEVELOPMENT, LEGAL ISSUES
AND ECONOMICS OF OPEN SOURCE &
GNU PROJECT.

THEORY:-

OPEN SOURCE DEVELOPMENT:-

DEMOGRAPHICS:-

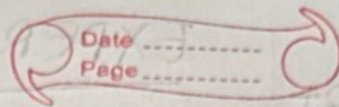
Demographics in open source development refers to the characteristics and contribution and distribution of individuals who contribute to the open source. They can contribute some research, code or whatever they feel to be shared can be uploaded.

Demographics has multiple aspects or components and some of them are:-

- 1] Geographical distribution:- (where they are from)
- 2] Professional Background:- (what the contributor does)
- 3] Experience level :- (How experienced the contributor is)
- 4] Educational background:- (what the contributor has studied)
- 5] Economic factors:-

Basically anyone can contribute to open source & no matter what that persons background is

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SOCIOLOGY AND PSYCHOLOGY-

In general there exists some sociology and psychology of everything

Sociology refers to in open source refers to which all contributors and communities are present. Which committees are contributing, what role they play. Social and other norms that the contributor / contributors may be following or the way of working of them.

GNU:-

GNU is a project that was developed or founded by Richard Stallman, he was a software developer who developed this GNU project with "unix-like" principle that the information or resources uploaded should be present for multiple people and one and all online and it should be free and easily accessible.

LEGAL ISSUES:-

Multiple legal issues can be faced hence we need to have some licenses in-order to prevent these legal issues like copy-right. Legal issues can be problematic. Hence there were three licences
GPL, MIT & APACHE

LICENCES

GPL	MIT	APACHE
① general purpose licence	Massachusetts Institute of Technology ^(funded here)	Apache Source Foundation
② Key feature of philosophy is <u>copyleft</u>	keyfeature of philosophy is <u>permissiveness</u>	key feature of philosophy is <u>permissiveness</u>
③ <u>copyleft</u> :- it ensures that the source remains free and <u>open</u>	<u>permissiveness</u> :- it allows almost <u>unrestricted</u> access to information	allows <u>unrestricted</u> access
④ not compatible	compatible	not as compatible as MIT

FEDORA	DEBIAN
① from Red hat INC	from debian project
② Time based	Fixed time
③ every 6-months	(2-3) years
④ rolling edge	Stable/versable

nano file name
example nano factorial.c ← to create or open it ^{if already created}

ctrl + o ← to save in terminal
Enter

g++ -o fact filename } open the file in nano
./fact

Factorial code

// USING RECURSION

#include <iostream>

using namespace std;

~~int main()~~

int factorial (int n)

if (n <= 1)

return 1;

else

return n * factorial(n-1); // calling of function
this recursive call

int main () {

~~int~~ cout << "Enter your number to know its factorial" << endl;

cin >> n;

~~cout~~ if (n < 0) {

cout << "The number cannot be negative" << endl;

else {

cout << "The factorial of your number is " << factorial(n) << endl;

}

return 0;

}

CONCLUSION:- Hence in this laboratory session we have done experiment nos. 2. we have ~~done~~ learnt open source development further in demographics, sociology & psychology of open source, legal issues and economics and project, licences, redone debian, g++ compiler and our factorial code.

We have briefly read about these and discussed them well in class.

sysadmin@sysadmin: ~

```
sysadmin@sysadmin:~$ g++ -o fact factorialvi.cpp
```

```
sysadmin@sysadmin:~$ ./fact
```

Enter your number to obtain factorial value: 7

Factorial of 7 is 5040

```
sysadmin@sysadmin:~$
```

```
sysadmin@sysadmin:~$ g++ -o fact factorialvi.cpp
```

```
sysadmin@sysadmin:~$ ./fact
```

Enter your number to obtain factorial value: -2

Factorial is not defined for negative numbers.

```
sysadmin@sysadmin:~$ S
```