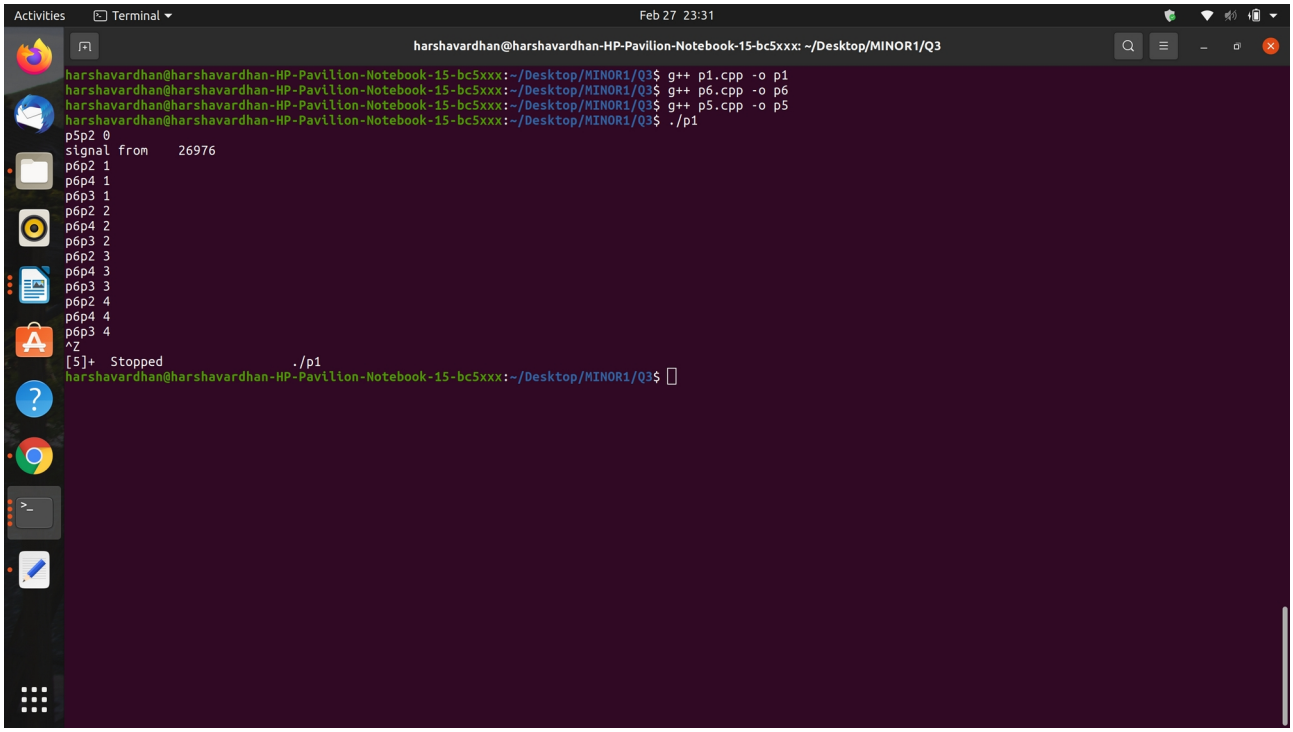
187241
Minor_Q3



P2,P3,P4 input is dupped to P1 for cin

P1 output(cout) not getting dupped -> some problem

P1:

```
#include<iostream>
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
#include<assert.h>
#include <sys/wait.h>
#include<sys/socket.h>
#include<netinet/in.h>
#include<arpa/inet.h>
#include<poll.h>
#include <unistd.h>
#include <iostream>
#include <pthread.h>
#include <sys/types.h>
#include <sys/wait.h>
#include <sys/stat.h>
#include <stdio.h>
#include <stdlib.h>
```

```
#include <unistd.h>
#include <string.h>
#include <fcntl.h>
#include <string.h>
#include <sys/shm.h>
#include <sys/sem.h>
#include <signal.h>
using namespace std;

static struct sigaction siga;
key_t key=ftok(".",65);

struct shmem
{
        int i;
};
struct shmem *z;
int k;


int f=1;
int cnt=0;
static void multi_handler(int sig, siginfo_t *siginfo, void *context)
{
        pid_t sender_pid = siginfo->si_pid;
        cnt=1;
      cout<<"signal from    "<<sender_pid<<endl;
      sleep(1);
}

int main()
{

        siga.sa_sigaction = *multi_handler;
        siga.sa_flags |= SA_SIGINFO;
        sigaction(SIGUSR1, &siga, NULL);

        int shmid = shmget(key,sizeof(shmem),IPC_CREAT|0660);
        z = (struct shmem*)shmat(shmid,NULL,0);
        z->i=getpid();


        int fd2=fileno(popen("./p2","r"));
        int fd3=fileno(popen("./p3","r"));
        int fd4=fileno(popen("./p4","r"));



        int fd5=fileno(popen("./p5","w"));
        int fd6=fileno(popen("./p6","w"));

        struct pollfd pfds[3];
```

```
//
//      dup2(fd6,1);


        while(1)
        {
                pfds[0].fd=fd2;
                pfds[0].events=POLLIN;
                pfds[1].fd=fd3;
                pfds[1].events=POLLIN;
                pfds[2].fd=fd4;
                pfds[2].events=POLLIN;



                int count = poll(pfds,3,0);
                if(count>0)
                {
                for(int i=0;i<3;i++)
                {
                        if(pfds[i].revents && POLLIN)
                        {

                                if(cnt==0)
                                {
                                        dup2(0,20);
                                dup2(pfds[i].fd,0);
                                string s;
                                getline(cin,s);
                                dup2(1,66);
                                dup2(fd5,1);
                                cout<<s<<endl;
                                dup2(66,1);
                                pfds[i].revents=0;
                                dup2(20,0);



                                }
                                else
                                {

                                        dup2(0,20);
                                dup2(pfds[i].fd,0);
                                string s;
                                getline(cin,s);
                                dup2(1,67);
                                dup2(fd6,1);
                                cout<<s<<endl;
                                dup2(67,1);
                                pfds[i].revents=0;
```

```
                                dup2(20,0);




                                }


                        }


                }


                }


        }

        return 0;
}
```

P2:

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
#include<bits/stdc++.h>
using namespace std;
#define e 1024
int main(){


   for(int i=0;i<100;i++)
   {
        cout<<"p2 "<<i<<endl;
        sleep(3);

   }
}
```

P3:

```
#include <stdio.h>
```

```
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
#include<bits/stdc++.h>
using namespace std;
#define e 1024
int main(){


   for(int i=0;i<100;i++)
   {
         cout<<"p3 "<<i<<endl;
         sleep(3);

   }
}
```

P4:

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
#include<bits/stdc++.h>
using namespace std;
#define e 1024
int main(){


   for(int i=0;i<100;i++)
   {
         cout<<"p4 "<<i<<endl;
         sleep(3);

   }
}
```

P5:

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
#include<bits/stdc++.h>
#include <iostream>
#include <pthread.h>
#include <sys/types.h>
#include <sys/wait.h>
#include <sys/stat.h>
#include <stdio.h>
#include <stdlib.h>
```

```
#include <unistd.h>
#include <string.h>
#include <fcntl.h>
#include <string.h>
#include <sys/shm.h>
#include <sys/sem.h>
#include <signal.h>
using namespace std;
#define e 1024

static struct sigaction siga;
key_t key=ftok(".",65);

struct shmem
{
        int i;
};
int k,shmid;
struct shmem *z;

int main()
{
        shmid = shmget(key,sizeof(shmem),IPC_CREAT|0660);
        z = (struct shmem*)shmat(shmid,NULL,0);

   k=z->i;
   string str;
   getline(cin, str);
   cout<<str;
   kill((pid_t)k,SIGUSR1);
   exit(0);

}
```

P6:

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
#include<bits/stdc++.h>
using namespace std;
#define e 1024
int main(){
   string str;
   while(1)
   {
        getline(cin, str);
        cout<<str;

   }
  }
```