

```

#include #include #include #include #include // open,read(),close() : file related function void
typeline(char *p1,char*fname) { int handle,n,lcnt; char ch; handle=open(fname,O_RDONLY);
if(handle==-1) { printf("\n File %s Not Found...",fname); } else { if(strcmp(p1,"a")==0) { /*
Displaying All contents of file */ printf("\nContents of FILE=%s\n",fname);
while(read(handle,&ch,1)) //on failure read() function returns 0 { printf("%c",ch); } close(handle);
} else //else means parameter is either +n or -n { n=atoi(p1); lcnt=0; if(n>0) { printf("Displaying
First %d lines of file\n",n); while(read(handle,&ch,1)) { printf("%c",ch); if(ch=='\n') lcnt++;
if(lcnt==n) break; } close(handle); } else { n=-n; printf("Displaying Last %d lines of file\n",n);
while(read(handle,&ch,1)) { if(ch=='\n') lcnt++; } n=lcnt-n; lcnt=0; lseek(handle,0,SEEK_SET);
//starting from start of file again while(read(handle,&ch,1)) { if(ch=='\n') lcnt++; if(lcnt==n) break;
} while(read(handle,&ch,1)) { printf("%c",ch); } close(handle); } } } int main() { char
cmd[80],tok1[10],tok2[10],tok3[10],tok4[10]; int n; while(1) { printf("\nMYSHELL $");
fgets(cmd,80,stdin); n=sscanf(cmd,"%s%s%s%s",tok1,tok2,tok3,tok4); //n=no of tokens are
formed from given command switch(n) { case 1: if(fork()==0) { execlp(tok1,tok1,NULL);
//parameters- nameOfProcess,parametersOfProcess } wait(0); break; case 2 : if(fork()==0) {
execlp(tok1,tok1,tok2,NULL); } wait(0); break; case 3: if(strcmp(tok1,"typeline")==0) {
typeline(tok2,tok3); } else { if(fork()==0) { execlp(tok1,tok1,tok2,tok3,NULL); } wait(0); } break;
case 4 : if(fork()==0) { execlp(tok1,tok1,tok2,tok3,tok4,NULL); } wait(0); break; } } /* OUTPUT *
[shalmali@localhost SHELL]$ ./a.out * * MY SHELL $]typeline -2 a.txt * Displaying Last 2 lines of
file * we are in tybcs. * we are programmer. * * MY SHELL $]typeline 2 a.txt * Displaying First 2
lines of file * India is my country. * I love my india. * * MY SHELL $]typeline a a.txt * * Contents of
FILE=a.txt * India is my country. * I love my india. * we are computer students from india. * we
are in tybcs. * we are programmer. * * MY SHELL $]^C * [shalmali@localhost SHELL]$ * * */

```