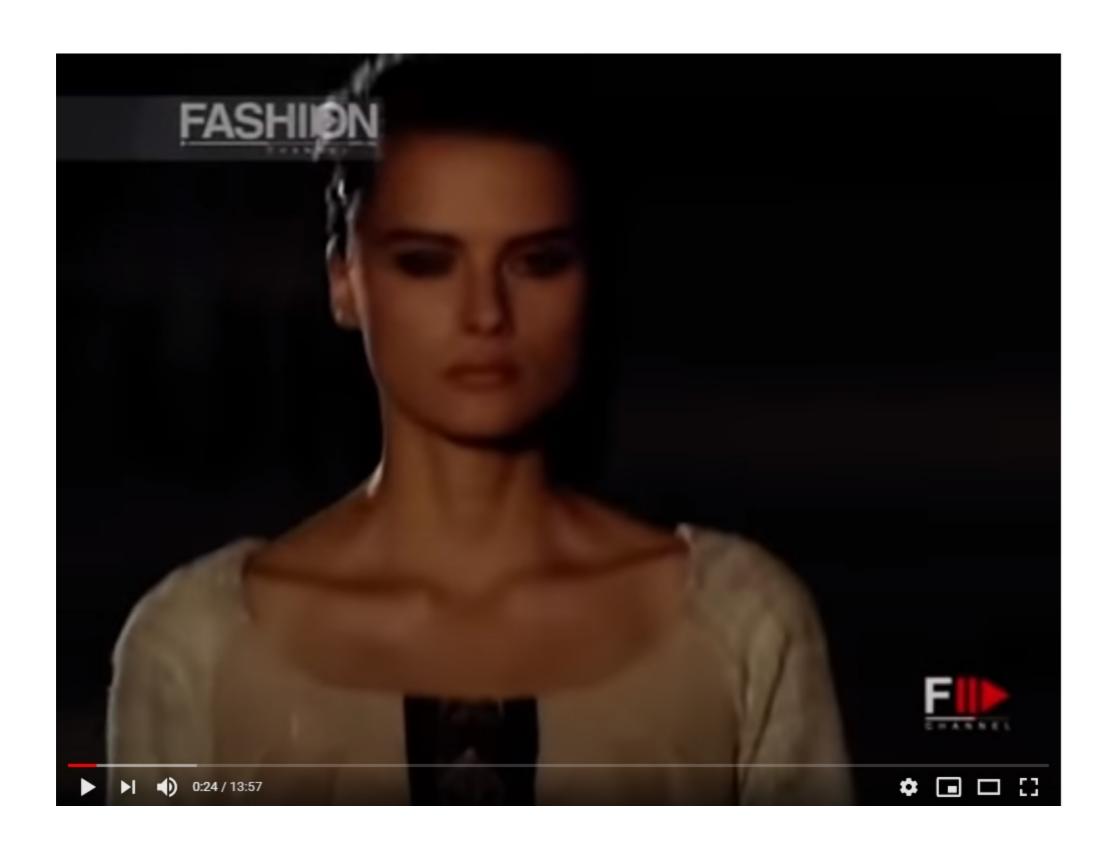
A Complete Course in Computers - First Edition Primer

Manas Kalia and Rajat Kalia

19 January, 1985



Recommendation Reasons: Manas is 99% Bhagat Singh Cases while bhagwaan has only been able to play it at most 5 to 7 times. Moreover Manas is playing fair which seals the case.

$\begin{array}{c} {\rm Part\ I} \\ {\rm Todarmal\ (\ A\ search\ Engine\)} \end{array}$

The project was later renamed tobu (with a new noticeboard image) in it's later run at IIT Delhi while i was the Administrator. Near closure, it was handled by "kala" guy for one day owing to his bullying while on that day also it was installed by me only although he requested the technique of setting up the project be explained to him. Our team totally discredits them as all the contact email-id's had other names that day(As per law code can't be copyrighted). In my presence, the ownership circulated amongst Shitiz Bansal, Vikas Rana, Rahul Jain(of Jwala), 2 Vivek Maliks (one Raj(original amongst those two) and one Pig "Nishant Kumar" (the copy)) and Vivek Shrivastav although Vivek was the name they were taking all the time, probably of Niraj Patel as setting the project was difficult and it was not possible for those people without Niraj Patel to set it up on the server (if crashed).

Programmed by Bill (Babbar Bhangoo) and discssed by him at Nahan, Problem Question worked on by Rajat (kalia). (2002 onwards)

```
//The driver.c file of Todarmal project to be stored in "src" folder
#include "myutil.h"
#include < sys/stat.h>
#include <dirent.h>
void rem_spaces(char *str) {
                 int flag, i, j;
                 // remove initial spaces
                 for (f \log i = j = 0; i < strlen(str); i++)
                                   if(isspace(str[i]) \&\& flag==0)
                                                     continue;
                                   f l a g = 1;
                                   str[j++]=str[i];
                 \operatorname{str}\left[j\right] = '\setminus 0';
                 //remove trailing spaces
                 for (i=strlen(str)-1;i>=0;i--)
                  if (isspace(str[i]))
                 \operatorname{str}[i] = ' \setminus 0';
                 else break;
int buildtree (char *share, char *name, char *ip, char *pid)
                 char treefile [256], command [256], mpoint [256];
                 int ret, success, pprotect;
                 FILE *fp;
                 success=pprotect=0;
                 // pprotect = password protect
                 strcpy(mpoint,"/mnt/tmp/mpoint_");
                 strcat (mpoint, pid);
                 strcpy(treefile,"../files/tmp/tree_");
                 strcat(treefile, pid);
                 ret=mkdir(mpoint, S IRUSR | S IWUSR | S IXUSR);
                 if (ret < 0)
                                   perror("Error in creating mount pt ");
                 strcpy (command, "/bin/tobumount");
                 strcat (command, ip);
                 strcat (command, "\"");
                 strcat (command, name);
                 strcat (command,"\"\"");
                 strcat (command, share);
                 strcat (command, "\" ");
                 strcat (command, pid);
                 fp=popen(command, "r");
                  // mount and see output of smbmount
                  if (fp=NULL)
                                   perror("smbmount pipe error ");
                  while (fgets (command, 256, fp)!=NULL)
                  //if ((char *) strstr (command, "ERRbadpw")!=NULL
                                   | | (char *) strstr (command, "ERR noaccess")!=NULL)
                                   if ((char *) strstr (command, "ERRbadpw")!=NULL)
                                   pprotect = 1;
                                   // has got some passwd
                                   else printf("SMBMNTOUT : %s",command);
                  //if (pprotect == 1)
                          printf("%s (%s) -> %s is passwd protected\n", ip, name, share);
                 pclose(fp);
                 fp = fopen("/proc/mounts", "r");
                  // read /proc/mounts to see if u have been able to mount the share
                  if (fp=NULL)
                 perror("Error Can't read /proc/mounts ");
                 while (fgets (command, 256, fp)!=NULL)
                                   if ((char *) strstr (command, pid)!=NULL)
                                   success=1; // so we have mounted that share
                  fclose (fp);
                 if (success || pprotect)
                                   if (success == 1)
                                                     printf("Building tree %s (%s) -> %s\n",ip,name,share);
                                                     fflush (stdout);
                                   strcpy (command, ". / tree ");
                                   strcat (command, mpoint); // local mount point
                                   strcat (command, " > ");
                                   strcat (command, treefile);
                                   system(command); // build tree
                                   strcpy(command, "/bin/tobufree"); // a root setuid script
                                   strcat (command, pid);
                                   if (success == 1)
                                                                       system (command); // umount mpoint
                                   ret=rmdir(mpoint); // remove local mount pt
                                   if (ret < 0)
                                   perror("Error in removing mount pt ");
```

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```
return(success || pprotect);
                void writename(char *name, char *ip)
                                 /* takes name and ip and writes name to file "../files/names/ip" */
                                 FILE * fp;
                                 char filename [256];
                                 strcpy(filename, "../files/names/");
                                 strcat(filename, ip);
                                 fp=fopen(filename, "w");
                                 if (fp=NULL)
                                                  fprintf(stderr, "Error Can't write name %s for %s", name, ip);
                                                  perror ("");
                                                  return;
                                 fprintf (fp, "%s", name);
                                 fclose(fp); }
                                 int findname (char *name, char *ip)
                                                           * uses system command nmblookup to find name
                                                                                                           * nmblookup is provided by smbclient
* for details go to http://www.samba.org
                                                  FILE *pipe;
                                                  char command [256], input [256], temp [5];
                                                  int success = 0, i;
                                                  strcpy (command, "nmblookup -A");
                                                  // system command : nmblookup -A ip address
                                                  strcat (command, ip); pipe=popen(command, "r");
                                                  // run command and read output
                                                  while (fgets (input, 256, pipe)!=NULL)
                                                                                                                                     && ((char*)strchr(input,'>'
                                                                  if (((char *) strchr(input,'<')!=NULL)
                                                                                   success=1; // so comp was connected
                                                                  if ((char *) strstr (input,"<20>")==NULL)
                                                                                   continue; // skip lines not having <20>
                                                                                   // process only lines with <\!20\!> in them
                                                                                    // this line should have a name
                                                                  for \, (\, i = \! 0; i \! < \! strlen \, (\, input \, ) \, ; \, i + \! + \! )
                                                                                                    temp[0] = input[i];
                                                                                                    temp[1] = input[i+1];
                                                                                                    temp[2] = input[i+2];
                                                                                                    temp[3] = input[i+3];
                                                                                                    temp[4] = ' \setminus 0';
                                                                                                    if (strcmp(temp, "<20>")==0)
                                                                                                                    input [i] = ' \setminus 0';
                                                                                                                    break;
                                                                                                    // input has still till <20> (excluding <20>)
                                                                  rem spaces(input);
                                                                  strcpy (name, input); //we have name of comp now
                                                  pclose (pipe);
                                                  if (success == 1)
                                                  writename (name, ip);
                                                  return(success); }
void writeshares (struct listnode *sharelist, char *ip) { /*
                                                                           * if comp is connected ... * then shares are writtern in ../files/shares/ip
* and tree of shares is built in next stage
                                                 * this stage also deletes the tree files which correspond to ... * shared folders which are no longe
*/
                        DIR *dp;
                                         struct dirent *dinfo; char filename [256], *fileip, *fileshare, command [256];
                                                                                                                            struct listnode *p, * filelist;
        FILE *fp;
        filelist = p=NULL;
                                                strcat(filename, ip); fp=fopen(filename, "w");
                                                                                                          // write list of shares ...
        strcpy(filename,"../files/shares/");
                                                                                                                                            if (fp==NULL)
struct listnode *findshares(char *name, char *ip) { struct listnode *sharelist=NULL; char command[256], input[256]; FILE *pipe; int success
        strcpy (command, "smbclient -L \""); strcat (command, name); strcat (command, "\" -I "); strcat (command, ip);
                                                                                                                                     strcat (command, "-N");
        pipe=popen(command, "r"); // command used as junk space below
                                                                          while (fgets (input, 256, pipe)!=NULL)
                                                                                                                                     // add some smart error par
                                                                                                                 {
                                         // not doing it this time to avoidm race condition
// next time i will find the new name
                                                                                                                                     success=1;
|| input [18]! = 's' || input [19]! = 'k')
                                                                          fprintf(stderr, "Error: \"Disk\" in %s\n", input);
                                                                                                                                                      continue;
                                         FILE *fp;
                                                                                                                char pidjunk[20],command[256]; struct stat
                                                          char ip [20], filename [256], name [20], sharename [256];
int main(int argc, char *argv[]) {
        if (argc!=3)
                                         fprintf(stderr, "Usage: driver ip address sleep time(min)\n");
                                                                                                                                            ret = 0; ret = (int) st
                                                                                                                    exit (1);
        if (strcmp(ip, "10.136.1.211") == 0) exit (1);
                                                          time(&ctime); // current time
                                                 strcat(filename, ip); ret=stat(filename,&filebuf);
                                                                                                            strcpy(name, "");
                                                                                                                                     if ((ret >= 0) \&\& (ctime - file
        strcpy(filename, "../files/names/");
                                                                                                            fp=fopen(filename, "r");
&& (strcmp(argv[2], "-1")!=0)){
                                                  // file for name is there and is not so old
                                                                                                                                                      if (fp≕NULL
        if (strcmp(name,"")==0)
                                                                                           exit(1); // comp has no name }
                                                          writeshares (NULL, ip);
                                                  // let's find the shares of that comp
                                                                                           strcpy(filename, "../files/shares/");
        // now that we have got name of comp
                                                                                                                                     strcat (filename, ip); ret
&& (\operatorname{strcmp}(\operatorname{argv}[2], "-1")! = 0)) {
                                                  // we have info about shares
                                                                                           fp=fopen(filename, "r");
                                                                                                                                     if (fp=NULL)
                                                                                                                                     strcpy(filename,"../files/t
        // cool ... we have the share list .. time to build tree. for (p=sharelist;p!=NULL;p=p->next)
                                                  continue; // skip this share
                                                                                           printf("Attempt to mount %s (%s) -> %s\n", ip, name, p->key);
&& (\text{strcmp}(\text{argv}[2], "-1")!=0))
                                                  strcat(command, filename); // tree file
                strcpy (command, "mv");
                                                                                                   strcat (command, "\"");
                                                                                                                                     strcpy(filename,"../files/t
freelist(sharelist); }
```

Part II Puyo Puyo (A 2D Game)

```
This was the problem asked in my Gameloft Interview in the preliminary round. It was worked on by Rahul Agrawal. I chose PHP later in life and wasn't comfortable with Java. (2007)
```

```
import java.applet.*; import java.awt.*; import java.awt.image.*; import java.awt.event.*; //import java.net.*;
public class Puyopuyo extends Applet implements Runnable, KeyListener { //drawing vars BufferedImage bufferdImg; Graphics2D bufferdImgSurface; Thread gameTh
//board vars public int bordXct=6,bordYct=12;
                                                                                //board dimensions
                                                                                                           //use only even numbers for bordXct.... public int bordct=bordXct*b
                                                                     //bord y public int bordpxlX[]=new int[bordct]; //xpxel position public int bordpxlY[]=new
public int bordY[] = new int[bordct];
                                                                    //is capsule public boolean bordfxd[]=new boolean[bordct];
public boolean bordcapsule[] = new boolean[bordct];
                                                                                                                                                             //is fixed to bord? public in
                                       //icon size public boolean canCtrlCaps; //can you control the capsule? public int capsDxn;
public int iconz = 32;
                                                                                                                                                                                    //capsule d
/* capsDxn \longrightarrow [pvt][odr]
[odr][pvt]
 pvt] [odr]
[odr] [pvt]
* the pvt being the Front of the capsule
                                                 down 3 =
                                                                     ryt 4 =
  = going left 2 <math>=
the number corresponds to these : and the number inside the plane corresponds to the index of array
                             12
                                                           67
                                                                     68
                                                                            69
                                                                                         70
                                                                                                                                 11
                                                                                               71
                                                                                                                                                                                          bord X
\_0 \_1 \_2 \_3 \_4 \_5
                                                                                                                                           //lenght of delay for icons to fall public
//game timing vars public long dwnTymHoldr;
                                                                      //holder for the down tym public long dwnTym;
                                                //game over boolean isAuto; //the game moves by itself boolean isStart;
 game switches boolean isOver;
                                                                                                                                                             //start to play? boolean isl
 /move swithces boolean toLft; //move capsule to left? boolean toRyt; //move capsule to ryt? boolean rot8L; //rot8 ccwise? boolean rot8R; //rot8 cwis
 //score vars public long hiscore, score; public int lvl; public long lnkCtr;
                             i just copied this part from a tutorial but i know (barely) how it works //
                                                                                                                                                                          it's self explanato
 //xtravars public int gg;
                                       //i just copied this part from a tutorial :) Thread gameThread = new Thread(this); gameThread.start();
public void start(){
public void init(){
                              //i also copid this :) this is where initialization takes place int i; if (bordXct<6)
                                                                                                                                                                          // min size of vord
public void run(){
                                                           // Starts the loop
                                                                                                                                                                          if (ismovedelay &&
                              while (true) {
                                                                                                   tick start = System.currentTimeMillis();
                                                                                                                                           tick duration = tick end - tick start;
                    repaint (); // Redraw the screen
                                                                               tick end = System.currentTimeMillis();
public void paint(Graphics g){ update(g);
public void update (Graphics g) { //updates the screen
                                                                   if (freeze)
                                                                                                                                                                Graphics2D g2 = (Graphics2D
                                                                                         //if is over, no mre...
                                                                                                                                            return;
//drwCap(bufferdImgSurface);
                                                 drwImg(bufferdImgSurface);
                                                                                          //drwas the entire bord
         if (isPlay){
                                        if (isAuto){
                                                           //the game automatically controls the game
                                                                                                                                           dwnTym = 50;
                                                                                                                                                                //makes down tym a bit fast
dwnTym=dwnTymHoldr;
                              //dwntym is reset to initialized value
                                                                                                                       dwnTymStrt=System.currentTimeMillis(); //set dwntym start
for (i=1;i\leq Lnkct;i++)\{//loop\ all\ links\ check\ every\ link\}
                                                                                                                                  if (chkbordlnk(i)){
                                                                                                                                                               // if there is something to
                                                           //break those links :) and make the others float
                                                                                                                                                     //makes the PROBABLE icons float (un
                                                            \ln k \operatorname{Ctr} ++;
                                                                                                                                  makeFloat();
toDwn=false;
                                                            fin=true;
                                                                                                                                                                else
                                                                                                                                                                         //true, u can contr
                                                            drwCap (bufferdImgSurface);
                                                                                                                       drwImg(bufferdImgSurface);
                                                                                                                                                                //drwas the entire bord
                                                                                                                                                     if (bordicon[i]!=0)
          if (fin){
                                                            // for (i=0; i < bordct; i++)
                                                                                                    //loop all icon
                                                                                                                                                                                  //if not bla
                              //game over?
                                                                    int i; canCtrlCaps=false;
                                                                                                                                 bordPX=iconz*bordXct; bordPY=iconz*bordYct; scrW
public void initBoard(){
                                                                                                             capsDxn=0;
                                        //init the bord
public void initGame(){
                                       initBoard ();
                                                           score = 0;
                                                                                lvl = 1; lnkCtr = 0;
                                                                                                             dwnTymHoldr = 2500;
                                                                                                                                           dwnTym=dwnTymHoldr; ismovedelay=false;
public void chkstage(){
                                       if (\ln k \operatorname{Ctr} > = 5)
                                                                                lvl++;
                                                                                                    if (dwnTymHoldr>500)
                                                                                                                                                     dwnTymHoldr=dwnTymHoldr-500;
public int getscore(int ini){    int i; int ctr=0;
                                                                                                                       if (bordLnk[i] == ini)
                                                                     for (i=0; i < b \text{ ord ct}; i++)
                                                                                                                                                     //if linknumber of icon==sought-aft
public void drwscores(Graphics2D sorpes){
                                                        sorpes.setColor(Color.white); if (score>hiscore && score>5000)
                                                                                                                                                                hiscore=score; sorpes.draw
                                sorpes . drawString ("Score
                                                                                                                                     sorpes.drawString("Lvl. : " + lvl,10,bordTop-7)
                                                                  : " + score, 10, 20);
: " + hiscore, 10, 10);
                                                                                                    if (lvl!=0)
public \ void \ drwCap(Graphics2D \ sorpes) \{ \ sorpes.drawImage(eyecon[cap1],(scrWD/2)+iconz,bordTop-iconz-5,this); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz,bordTop-iconz-5,this); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz,bordTop-iconz-5,this); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz,bordTop-iconz-5,this); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz,bordTop-iconz-5,this); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz,bordTop-iconz-5,this)); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz,bordTop-iconz-6,this)); \ sorpes.drawImage(eyecon[cap2],(scrWD/2)+(iconz-6,this)); \ sorpes.drawImage(eyeco
public void drwImg(Graphics2D sorpes) { //drwas the icons
                                                                                                           for (i=0; i < b \text{ ord } ct; i++){ //loop all icons
                                                                               int i; int kulay;
                                                                                                                                                                                   kulay=bordi
                                       int c1, c2, cx1, cy1, cx2, cy2;
                                                                               c1=getIdxpvt(); //get the index if the PVT of capsule c2=getIdxodr(); //get the index of
public void moveCLft(){
if (cx2==1 \mid | cx1==1) //if any icon on the left border of bord ucant move enimore
                                                                                                                                           if (cx1>cx2 && !bordfxd[c2-1]){
                                                                                                                       return;
/* the same concept of moving applies when going ryt */
public void moveCRyt(){
                                                                                c1=getIdxpvt();
                                                                                                                                           cx1=bordX[c1]; cy1=bordY[c1]; cx2=bordX[c2]
                                       int c1, c2, cx1, cy1, cx2, cy2;
                                                                                                              c2 = getIdxodr();
if (cx1 == bordXct \mid | cx2 == bordXct)
                                                                               if (cx1>cx2 && !bordfxd[c1+1]){
                                                                                                                                  //caps=horizontal .. the pvot is on the ryt && noth
                                                           return;
public void switchCaps(){
                                        //\,switch\ capsule\ color\ int\ c1\,,c2\,,cx1\,,cy1\,,cx2\,,cy2\,,tmp;\ c1=getIdxpvt\left(\right);\ //\,already\ discussed
                                                                                                                                                               c2=getIdxodr();
                                        //rotate the capsule clockwise int c1,c2,cx1,cy1;
                                                                                                                                                                          cx1=bordX [c1]; cy1:
public void moverot8R(){
                                                                                                              c1=getIdxpvt(); //:) c2=getIdxodr();
                                                                                                             //on topmost row?
                                                                                                                                                                bordicon [c1+bordXct]=bordico
         if (capsDxn==1){
                                        //ryt going down
                                                                                if (cy1!=bordYct){
/* same concept of rotating as moverot8R */ public void moverot8L(){ //rotate counter clockwise
                                                                                                                                 int c1,c2,cx1,cy1;
                                                                                                                                                               c1=getIdxpvt();
                                                                                                                                  bordicon[c1+bordXct]=bordicon[c2];
                                       //left going down
         if (capsDxn==3){
                                                                                if (cy1!=bordYct){
                                                                                                                                  int c1,c2,cx1,cy1,cx2,cy2,tmp; boolean c1u,c2u;
public void movecapDwn(){
                                        //movecapsule down
                                                                     if (!canCtrlCaps)
                                                                                                              return;
bordcapsule [c1] = false;
                                                                                                              else { //PVT under ODR
                                                                                                                                                                          if (chkUnder(cx1,cy
public void clrLnk(){
                                                                                                                                 bordLnk[i]=0; //set link number to 0 }
                            //removes all link
                                                            int i; Lnkct = 0;
                                                                                         for (i=0; i < b \text{ ord ct}; i++)
                                                           //check if inLnknum is linked >4 .. inLnknum is a linknumber int i; int ctr=0;
public boolean chkbordlnk(int inLnknum){
                                                                                                                                                                        for (i=0; i < b \text{ ord } ct; i)
                                                 //breaks the link of the linknumber used in conjuction with chkbordLnk int i; for (i=0;i<bordct;i++)
public void breaklnk(int inLnk){
                                                                                                                                                                                    //loop to r
public void lnkBord(){ //link the bord
                                                           clrLnk();
                                                                               //clear links
                                                                                                   int x,y,idx,idxtgt;
                                                                                                                                  for (x=1;x \le b \text{ or } dXct;x++){
                    //create new link
                                                                                                              bordLnk[idx]=Lnkct;
                                                                                                                                           //and assign
Lnkct++;
bordLnk[idxtgt]=bordLnk[idx];
                                                                                                    else if (bordLnk[idx]==0 \&\& bordLnk[idxtgt]!=0) //idx have no link
                                                                                                             //lnk not same make new link number
bordLnk[idx]=bordLnk[idxtgt];
                                                                                                    else{
                                                                                                              bordLnk[idx]=Lnkct;
                 //create new link
Lnkct++;
bordLnk[idxtgt] = bordLnk[idx];
                                                                                                    else if (bordLnk[idx]==0 \&\& bordLnk[idxtgt]!=0) //idx have no link
bordLnk[idx]=bordLnk[idxtgt];
                                                                                                    else{ //lnk not same make new link number
                                        //not fixd, floating or icon=0, no need to traverse, break to next x
                                                                                                                                                                break;
                             else
                                                          //change the link number of a into b .. self explanatory :)
public void lnkchange(int lnkfrm, int lnkto){
                                                                                                                                         int i; for (i=0; i < b \text{ ord } ct; i++)
                                                                                                                                  if (!bordfxd[i] && bordicon[i]!=0){
                                                                                                                                                                                              // i
public void moveallDwn() {
                                        //\text{move all icons down} int i; for (i=0;i<\text{bordct};i++)
public void makeFloat(){
                                        //chacks the highest pt of each columns and make the remaining float
                                                                                                                                  int x,y,z;
                                                                                                                                                     boolean nomore;
                                                                                                                                                                                   for (x=1;x<
public void newCaps(){ //generates a new capsule
                                                                   cap1=getRandIcon();
                                                                                                   cap2=getRandIcon();
                                                                                                                                  isderCaps=true;
                                       //transfercaps to bord capsDxn=3;
                                                                                                                                 x=getbordIdx(z,bordYct);
                                                                                                             z=bordXct/2:
public boolean transCaps(){
                                                                                         int x,y,z;
                                                                                                                                                                          if (bordfxd[x]) //a
return false;
                                                                                                                       bordicon[x] = cap1;
         bordpvt[x] = true;
                                        //make this PVT
                                                                      bordcapsule[x]=true;
                                                                                                  //and caps
                                                                                                                                                     //get a random icon color
                                                                                                                                                                                              bor
public int getIdxpvt() { // gets the index of PVT
                                                                     int i; for (i=0; i < b \text{ or } dct; i++)
                                                                                                                                  if (bordpvt[i] && bordcapsule[i])
                                                                                                                                                                                  //if this i
public int getIdxodr(){ //get ODR index
                                                           int i; for (i=0; i < b \text{ ord } ct; i++)
                                                                                                                       if (!bordpvt[i] && bordcapsule[i])
                                                                                                                                                                         //this is not PVT "
public int getRandIcon(){
                                        //:) return (int)((Math.random()*100)%4)+1; }
public boolean chkFloat(){
                                        //check if there are still floating
                                                                                         int i; for (i=0; i < bordct; i++)
                                                                                                                                                      if (bordicon[i]!=0 && !bordfxd[i])
                                                            //\text{returns} the index of (x,y) return (((\text{inY}-1)*\text{bordXct})+\text{inX})-1;
public int getbordIdx(int inX, int inY){
public boolean chkUnder(int inbordX, int inbordY){
                                                                                                                              if (inbordY==1) //on lowest row?
                                                                    //check if under of (x,y) is fixed or floor
public void moveiconDwn(int inX, int inY){
                                                           //moves the icon of current (x,y) down int lowbrd, bordidx;
                                                                                                                                          lowbrd=inY-1; bordidx=getbordIdx(inX,lowb
public void drwBorder(Graphics2D sorpes){
                                                            //draws the lines
                                                                                                             drwLine(bordLft - 3, bordTop - 3, bordLft - 3, bordTop + bordPY + 3, sorpes);
                                                                                        //vertical
public void drwLine(int X, int Y, int x, int y, Graphics2D sorpes) { //print borderlines
                                                                                                             if (x=X) { // vertical line
                                                                                                                                                               sorpes. set Color (Color, white
                                                                                                             sorpes. drawLine (X+2,Y+2,x+2,y-2);
sorpes.setColor(Color.gray);
                                                sorpes . drawLine (X+1,Y+1,x+1,y-1);
                                                                                                                                                                                    if (y==Y)
```

public void keyPressed(KeyEvent ke){ int kcode=gg=ke.getKeyCode(); //get the key code

if (!ismovedelay && canCtrlCaps && isPlay){

//if u can

Part III

Rootkit-lms v3 (learning management system of a study institute, Alpha classes in this particular case)

(2009-2013)

$$\operatorname{Part}\ IV$$ Vik the Legend (A 3D Game)

 $(2018\ \mathrm{via}\ \mathrm{Unity})$ The earth was made working by Taya Tayi (Jagjeet Manjeet)

Part V

A junior project (init function of a Jquery html design)

```
Programmed by Sher1.0 on Suraj's request although he didn't program the 3rd level loop. (2017) Script Installed and html written by Saloni (maami-shivi duo)
*/ /* init.js: Init sc
/***************/ /* Object Setup */ /***************/
      this.isFluid = false;
       5gridC.prototype.bind = function(name, f) {
                                                                 if (!this.events[name])
                                                                                                            this.events[name] = new Array();
              this.events[name].push(f); }
       _5gridC.prototype.trigger = function(name)
                                              if (!this.isReady | !this.events[name] | this.events[name].length < 1)
       for (i in this.events[name]) (this.events[name][i])(); }
_5gridC.prototype.ready = function(f) { this.bind('ready', f); } __5gridC.prototype.orientationChange = function(f) { this.bind('orientationChange) } (this.events[name][i])(); }
       _5 	ext{gridC.prototype.readyCheck} = 	ext{function()} { var 	ext{x} = 	ext{this};
                                                                                             x.trigger('ready');
              window.setTimeout(function() {
                                                         if (x.isReady)
                                                                                                                                  else
       var \ \_5grid = new \ \_5gridC;
(function() {
                                      */ /*************
/***********/ /* Initialize
                                   _baseURL, _opts, __fluid, _1000px, _1200px, _mobile, _desktop, _mobileOnly, _headQueue.pushI_5grid = function(s) { _headQueue.push({ type: 'i', value: s }); }; __headQueue.pushE_5grid = function(s) { _if (document.createStyleSheet) } doE
       // Vars
       // Shortcut methods
                     for (x in _headQueue)

se URL _opts
\_\operatorname{headQueue.process}\_5\operatorname{grid} = \operatorname{function}() \ \{
                                                                                      if (\text{headQueue}[x]. \text{type} = 'i')
                                  x = \text{jQuery('script')}. \ \text{filter(function() { return this.src.match(/5\,grid\,\backslash/\,init\,\backslash.\,js\,/); }). \ \text{first();}
       // Determine base URL, opts
              // Default opts
                                           _opts['use'] = 'mobile,desktop';
                                                                                                     _opts['prefix'] = 'style';
                                   if (y.length > 1)
              // Custom opts
                                                                                                           x = y[1]. split('&');
             if (_opts['debug.noExtLoad'] == 1)
                                                                                      _{\rm headQueue.pushE\_5grid} = {\rm function}(s) \ \{\ \};
       // Debug options
       // Determine viewing modes
*/ /*************
                                                                                                                                  if (jQuery.
                                                                                              // HTML5 Shiv
                     // Versions that don't support CSS3 pseudo classes
                                                                                              if (jQuery.browser.version < 8)
_headQueue.pushE_5grid(_baseURL + _opts['prefix'] +
              // Fix: On iOS, screen.width is always the width of the device held in portrait mode.
                                                                                                  // Android, however, sets it to the width o
              5grid.isMo
                                                                                              opts['mobileUI.force'] = 1;
                            if ( opts['mobileUI.theme'] != 'none')
                                                                                                                           \_ head Queue . p us h E \_ 5 g
                                    if ( opts['mobileUI.themeTitleBarColor'])
                                                                                                                   _headQueue.pushI_5grid('#mo
                                    if (_opts['mobileUI.themeNavColor'])
                                                                                                             _{
m head\,Queue.\,pushI\_5grid}\,(\,{}'\#{
m mobileUI-s}
                      _headQueue.pushE_5grid(_baseURL + _opts['prefix'] + '-mobile.css');
                                                                                                            else
                            // 1200 px
                                                                 if (ww >= 1200)
                                    // Load 1200px stylesheet if 1200px was explicitly enabled
                                                                                                                           if ( 1200px)
                                                                                                                           if ( 1000px)
                                    // Load 1000px stylesheet if 1000px was explicitly enabled
              jQuery (function () { jQuery ('.5 grid -layout'). addClass ('5 grid'); });
jQuery(function() {
                                                                                      var body = jQuery('body'), speed = 0, easing = 'swing';
                     body.wrapInner('< div id="mobileUI-site-wrapper" />');
                                                                        var main_content = jQuery('.mobileUI-main-content'), main_content_target = .
                     // Move primary content
                            if (main\_content.length > 0)
                                                                                      if (main_content_target.length > 0)
                                                                        var x = jQuery('.mobileUI-site-name'), site_name = (x.length > 0 ? x.html()
                     // Get site name, nav options
                            jQuery('.mobileUI-site-nav a').each(function() {
                                                                                                           var t = jQuery(this), indent;
                                                                                                                           mobileUI site nav =
                             if (site_nav_options.length > 0)
                                                                 mobileUI_site_titlebar = jQuery('<div id="mobileUI-site-titlebar"><div id="mobileUI-site-titlebar"><div id="mobileUI-site-titlebar"><
                     // Configure elements
                            body.bind('touchmove', function(e) {
                                                                                             if (mobileUI_site_nav.isOpen_5grid)
                             // Mobile Site Wrapper
                                                                               mobileUI_site_wrapper
                             // Mobile Site Nav Opener
                                                                                      mobileUI_site_nav_opener
                             // Mobile Site Bar
                                                                               mobileUI_site_titlebar
                             // Mobile Site Nav
                                                                               mobileUI site nav
                                                                                             .css('left', -1 * mobileUI site nav.width())
                                    mobileUI\_site\_nav
                                    mobileUI site nav.find('a')
                                                                                                     .click(function(e) {
                                    if ( isTouch) {
                                                                                              var _mobileUI_site_nav_pos = 0;
                                    mobileUI_site_nav.isOpen_5grid = false;
                             // Body
                                                                                                                           .css('overflow', (_
                                                                        body
                                                         if (url)
                                                                                                                                  window.\ set\ T
                                    // Window
                                                                                       window
                                                                               jQuery ('.mobileUI-hide').remove();
                      // Remove mobileUI-hide elements
                      // Remove address bar
                                                                 if (opts['mobileUI.hideAddressBar'] == 1 && window.scrollTop() == 0)
/**************/ /* Head Queue
       _headQueue.process_5grid(); _5grid.isReady = true;
       jQuery(function() { _5grid.readyCheck(); });
})();
```