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% NPM : 58410707

% Kelas : 3IA01

?-

G\_wall is bitmap\_image("Images//don't make line copyok.bmp",\_),

G\_main is bitmap\_image("Images//caramain.bmp",\_),

G\_profil is bitmap\_image("Images//propil.bmp",\_),

G\_Background is bitmap\_image("Images//back.bmp",\_),

beep("Sound\\welcome.wav"),

message("Choose Colour","Silahkan memilih warna pemain anda !",i),

G\_Warna is select\_color(\_,0),

message("Choose Colour","Silahkan memilih warna lawan anda !",i),

G\_Warna2 is select\_color(\_,0),

read(Name,"Masukan nama anda",s),set(hisname(Name)),

%======Window Utama======%

window(G\_window1,\_,win\_func(\_),"Don't Make Line 4x4x4 ",380,90,610,590).

win\_func(paint):-

draw\_bitmap(0,0,G\_wall,\_,\_),fail.

%======Window Tombol======%

win\_func(init):-

button(\_,\_,mulai\_game(\_),"MULAI GAME",340,221,170,35),

button(\_,\_,cara\_main(\_),"CARA PERMAINAN",340,268,170,35),

button(\_,\_,developers(\_),"PROFIL DEVELOPER",340,315,170,35),

button(\_,\_,exit(\_),"KELUAR",340,361,170,35).

%\*\*\*\*\*\*Mulai Game\*\*\*\*\*\*%

mulai\_game(press):-

close\_window(G\_window1),

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]])),

set(end\_flag(false)),

pen(2,rgb(0,0,0)),

beep("Sound\\start.wav"),

window(Form2,\_,win\_func2(\_),"Don't Make Line 4x4x4 ",500,230,330,350).

win\_func2(init):-

menu(pop\_up,\_,\_,menu\_file(\_),"&File"),

menu(pop\_up,\_,\_,menu\_mode(\_),"&Mode"),

menu(normal,\_,\_,menu\_cheat(\_)," "),

menu(normal,\_,\_,menu\_cheat2(\_)," ").

menu\_file(init):-

menu(normal,\_,\_,m\_new(\_),"&New Game"),

menu(normal,\_,\_,m\_exit(\_),"&Exit").

menu\_mode(init):-

menu(normal,\_,\_,m\_new(\_),"Player First"),

menu(normal,\_,\_,m\_komputer(\_),"Komputer First").

menu\_cheat(press):-

set(situation([[[x,o,o,o],[x,o,o,o],[x,o,o,o],[f,x,x,x]], [[x,o,o,o],[o,o,o,f],[x,o,o,o],[x,x,f,x]], [[x,o,o,o],[x,o,o,o],[o,x,x,x],[x,o,x,x]],[[f,f,f,f],[x,f,f,x],[x,x,o,x],[x,x,x,f]]])),

win\_func2(paint).

menu\_cheat2(press):-

set(situation([[[o,o,o,x],[o,o,o,x],[o,o,o,x],[x,x,x,f]], [[x,x,x,o],[x,x,x,o],[x,x,x,o],[o,o,o,f]], [[o,o,o,x],[o,o,o,x],[o,o,o,x],[x,x,f,f]],[[x,x,x,o],[x,x,x,o],[x,x,x,o],[o,o,f,f]]])),

win\_func2(paint).

m\_komputer(press):-

Acak is random(11),

(Acak=0->

set(situation([[[o,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=1->

set(situation([[[f,f,f,f],[f,o,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=2->

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,o,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=3->

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,o]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=4->

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,o,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=5->

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,o,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=6->

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,o]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=7->

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[o,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=8->

set(situation([[[f,o,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=9->

set(situation([[[f,f,o,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

else (Acak=10->

set(situation([[[f,f,f,o],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]]))

))))))))))),

set(end\_flag(false)),

win\_func2(paint).

m\_new(press):-

message("New Game","Siap - siap... \n\n Permainan baru akan segera dimulai !",i),

set(situation([[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]], [[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]],[[f,f,f,f],[f,f,f,f],[f,f,f,f],[f,f,f,f]]])),

win\_func2(paint),

set(end\_flag(false)).

m\_exit(press):-

beep("Sound\\goodbye.wav"),

close\_window(\_).

win\_func2(paint):-

draw\_bitmap(0,0,G\_Background,\_,\_),

hisname(Aname),

S is Aname+" vs Komputer ", %tampilin nama

text\_out(0,0,S),

color\_text(\_,rgb(255,255,255)),

color\_text\_back(\_,rgb(12,58,29)),

situation(Pos),

for(X,0,3),

for(Y,0,3),

for(Z,3,0,-1),

member3(Pos,P,X,Y,Z),

colour(P),

X1 is 30+60\*X+10\*Z,

Y1 is 30+60\*Y+10\*Z,

X2 is X1+35,

Y2 is Y1+35,

ellipse(X1,Y1,X2,Y2),

fail.

win\_func2(paint).

colour(f):-

brush(rgb(255,255,255)).

colour(x):-

brush(G\_Warna).

colour(o):-

brush(G\_Warna2).

member([El,\_,\_,\_],El,0).

member([\_,El,\_,\_],El,1).

member([\_,\_,El,\_],El,2).

member([\_,\_,\_,El],El,3).

member2(Pos,El,X,Y):-

member(Pos,Row,Y),

member(Row,El,X).

member3(Pos,El,X,Y,Z):-

member(Pos,Page,Z),

member(Page,Row,Y),

member(Row,El,X).

findZ(X,Y,0,X1,Y1):-

(X- 47- 60\*X1)\*\*2 + (Y- 47- 60\*Y1)\*\*2<289,!.

findZ(X,Y,1,X1,Y1):-

(X- 57- 60\*X1)\*\*2 + (Y- 57- 60\*Y1)\*\*2<289,!.

findZ(X,Y,2,X1,Y1):-

(X- 67- 60\*X1)\*\*2 + (Y- 67- 60\*Y1)\*\*2<289,!.

findZ(X,Y,3,X1,Y1):-

(X- 77- 60\*X1)\*\*2 + (Y- 77- 60\*Y1)\*\*2<289.

win\_func2(mouse\_click(X,Y)):-

end\_flag(false),

X>30,

Y>30,

X<300,

Y<300,

X1 is (X- 30)//60,

Y1 is (Y- 30)//60,

situation(Pos),

findZ(X,Y,Z1,X1,Y1),

member3(Pos,f,X1,Y1,Z1),

!,

move(Pos2,Pos,x,X1,Y1,Z1),

set(situation(Pos2)),

win\_func2(paint),

think(Pos3,Pos2),

set(situation(Pos3)),

win\_func2(paint),

!, fail.

win\_func2(mouse\_click(X,Y)):-

beep.

think(Pos2,Pos):-

failure(x,Pos),

beep("Sound//ohnoo.wav"),

message("You Lose !","Maaf, kamu kalah melawan saya.",s),

beep("Sound\\cartoon4.wav"),

set(end\_flag(true)), !, fail.

think(Pos2,Pos):-

member3(Pos,f,X,Y,Z),

move(Pos2,Pos,o,X,Y,Z),

win(x,Pos2,1),

beep("Sound\\saran.wav"),

message("Saran","Udah, nyerah aja. Kamu ga mungkin menang",i),

beep("Sound\\laugh.wav").

think(Pos2,Pos):-

member3(Pos,f,X,Y,Z),

move(Pos2,Pos,o,X,Y,Z),

nolose(x,Pos2,2).

think(Pos2,Pos):-

member3(Pos,f,X,Y,Z),

move(Pos2,Pos,o,X,Y,Z),

nolose(x,Pos2,0),

beep("Sound\\multihit.wav"),

message("Selamat !","Kamu memiliki kesempatan menang kali ini.",n).

think(Pos2,Pos):-

member3(Pos,f,X,Y,Z),

move(Pos2,Pos,o,X,Y,Z),

message("You Win !","Wuih, kamu menang tuh selamat ya.",!),

beep("Sound\\message.wav"),

set(end\_flag(true)).

replace([El,A,B,C],[\_,A,B,C],El,0).

replace([A,El,B,C],[A,\_,B,C],El,1).

replace([A,B,El,C],[A,B,\_,C],El,2).

replace([A,B,C,El],[A,B,C,\_],El,3).

move(Pos2,Pos,P,X,Y,Z):-

member(Pos,Page,Z),

member(Page,Row,Y),

replace(Row2, Row,P,X),

replace(Page2, Page,Row2,Y),

replace(Pos2, Pos,Page2,Z).

move(Pos2,Pos,W):-

member3(Pos,f,X,Y,Z),

move(Pos2,Pos,W,X,Y,Z).

failure2(Who,[[Who,Who,Who,Who],\_,\_,\_]).

failure2(Who,[\_,[Who,Who,Who,Who],\_,\_]).

failure2(Who,[\_,\_,[Who,Who,Who,Who],\_]).

failure2(Who,[\_,\_,\_,[Who,Who,Who,Who]]).

failure2(Who,[[Who,\_,\_,\_],[Who,\_,\_,\_],[Who,\_,\_,\_],[Who,\_,\_,\_]]).

failure2(Who,[[\_,Who,\_,\_],[\_,Who,\_,\_],[\_,Who,\_,\_],[\_,Who,\_,\_]]).

failure2(Who,[[\_,\_,Who,\_],[\_,\_,Who,\_],[\_,\_,Who,\_],[\_,\_,Who,\_]]).

failure2(Who,[[\_,\_,\_,Who],[\_,\_,\_,Who],[\_,\_,\_,Who],[\_,\_,\_,Who]]).

failure2(Who,[[Who,\_,\_,\_],[\_,Who,\_,\_],[\_,\_,Who,\_],[\_,\_,\_,Who]]).

failure2(Who,[[\_,\_,\_,Who],[\_,\_,Who,\_],[\_,Who,\_,\_],[Who,\_,\_,\_]]).

failure(Who,Pos):-

member(Pos,Page,\_),

failure2(Who,Page).

failure(Who,Pos):-

member(Pos,Page0,0),

member2(Page0,Who,X,Y),

member(Pos,Page1,1),

member2(Page1,Who,X,Y),

member(Pos,Page2,2),

member2(Page2,Who,X,Y),

member(Pos,Page3,3),

member2(Page3,Who,X,Y).

failure(Who,Pos):-

member(Pos,Page0,0),

member2(Page0,Who,X,0),

member(Pos,Page1,1),

member2(Page1,Who,X,1),

member(Pos,Page2,2),

member2(Page2,Who,X,2),

member(Pos,Page3,3),

member2(Page3,Who,X,3).

failure(Who,Pos):-

member(Pos,Page0,0),

member2(Page0,Who,X,3),

member(Pos,Page1,1),

member2(Page1,Who,X,2),

member(Pos,Page2,2),

member2(Page2,Who,X,1),

member(Pos,Page3,3),

member2(Page3,Who,X,0).

failure(Who,Pos):-

member(Pos,Page0,0),

member2(Page0,Who,0,Y),

member(Pos,Page1,1),

member2(Page1,Who,1,Y),

member(Pos,Page2,2),

member2(Page2,Who,2,Y),

member(Pos,Page3,3),

member2(Page3,Who,3,Y).

failure(Who,Pos):-

member(Pos,Page0,0),

member2(Page0,Who,3,Y),

member(Pos,Page1,1),

member2(Page1,Who,2,Y),

member(Pos,Page2,2),

member2(Page2,Who,1,Y),

member(Pos,Page3,3),

member2(Page3,Who,0,Y).

failure(Who,[[[Who,\_,\_,\_],\_,\_,\_], [\_,[\_,Who,\_,\_],\_,\_], [\_,\_,[\_,\_,Who,\_],\_], [\_,\_,\_,[\_,\_,\_,Who]]]).

failure(Who,[[\_,\_,\_,[\_,\_,\_,Who]], [\_,\_,[\_,\_,Who,\_],\_], [\_,[\_,Who,\_,\_],\_,\_], [[Who,\_,\_,\_],\_,\_,\_]]).

failure(Who,[[[\_,\_,\_,Who],\_,\_,\_], [\_,[\_,\_,Who,\_],\_,\_], [\_,\_,[\_,Who,\_,\_],\_], [\_,\_,\_,[Who,\_,\_,\_]]]).

failure(Who,[[\_,\_,\_,[Who,\_,\_,\_]], [\_,\_,[\_,Who,\_,\_],\_], [\_,[\_,\_,Who,\_],\_,\_], [[\_,\_,\_,Who],\_,\_,\_]]).

win(o,Pos,Deep):-

failure(x,Pos).

win(x,\_,0):-

!, fail.

win(x,Pos,Deep):-

Deep1 is Deep - 1,

not(nowin(x,Pos,Deep1)).

win(o,Pos,Deep):-

move(Pos2,Pos,o),

win(x,Pos2,Deep).

nowin(x, Pos,Deep) :-

move(Pos2, Pos, x),

nowin(o, Pos2,Deep).

nowin( x, Pos,Deep) :-

failure(o, Pos).

nowin(o, Pos,Deep) :-

not(member3(Pos,f,\_,\_,\_)). % the last move belongs to X

nowin(o, Pos,Deep) :-

not(win(o, Pos,Deep)).

nolose(o,Pos,Deep):-

failure(x,Pos).

nolose(o,Pos,Deep):-

not(member3(Pos,f,\_,\_,\_)).

nolose(o,Pos,Deep):-

move(Pos2,Pos,o),

nolose(x,Pos2,Deep).

nolose(x,Pos,Deep):-

not(lose(x,Pos,Deep)).

lose(x,Pos,Deep):-

failure(o,Pos).

lose(o,\_,0):-

!, fail.

lose(x,Pos,Deep):-

move(Pos2,Pos,x),

Deep1 is Deep- 1,

lose(o,Pos2,Deep1).

lose(o,Pos,Deep):-

not(nolose(o,Pos,Deep)).

%------Cara Main------%

cara\_main(press):-

beep("Sound\\slideup.wav"),

window(G\_caramain,\_,win\_caramain(\_),"Cara Permainan",425,250,513,305).

win\_caramain(paint):-

draw\_bitmap(0,0,G\_main,\_,\_),fail.

win\_caramain(init):-

button(\_,\_,exit\_cm(\_),"KEMBALI",100,210,100,35).

exit\_cm(press):-

close\_window(G\_caramain).

%------Profile Developers------%

developers(press):-

beep("Sound\\slideup.wav"),

window(G\_developers,\_,win\_developers(\_),"Profil Developer",425,250,513,348).

win\_developers(paint):-

draw\_bitmap(0,0,G\_profil,\_,\_),fail.

win\_developers(init):-

button(\_,\_,exit\_dev(\_),"KEMBALI",200,260,100,35).

exit\_dev(press):-

close\_window(G\_developers).

%--------------- KELUAR GAME --------------------%

exit(press):-

beep("Sound\\goodbye.wav"),

close\_window(G\_window1),fail.