**Bezier Curve**

int fact(int);

float com(int,int);

int n,no;

float cpx,cpy;

float xk[10],yk[10];

float xu = 0.0;

float yu = 0.0;

float u;

int j;

int count =0;

float com(int n, int j){

float tot;

tot = fact(n)/(fact(j));

tot = tot /fact(n-j);

return(tot);

}

int fact (int n){

int i = n; int fact = 1;

if (i == 0)

return (1);

do{

fact = fact \* i;

i--;

}while( i >= 1 );

return (fact);

}

void \_\_fastcall TForm1::Timer1Timer(TObject \*Sender)

{

if (u >= 1){

Form1->Timer1->Enabled = false;

}else{

xu = 0;

yu = 0;

for(j = 0;j <= n;j++){

if(j!=0)

xu = xu + xk[j] \* com(n,j) \* pow(u,j) \*

pow((1-u),(n-j));

else

xu = xu + xk[j] \* com(n,j) \* pow((1-

u),(n-j));

}

for(j = 0;j <= n;j++){

if(j!=0)

yu = yu + yk[j] \* com(n,j) \* pow(u,j) \*

pow((1-u),(n-j));

else

yu = yu + yk[j] \* com(n,j) \* pow((1-

u),(n-j));

}

Form1->Canvas->MoveTo(cpx,cpy);//draw path

Form1->Canvas->LineTo(xu,yu);

cpx = xu;

cpy = yu;

u = u + 0.005;

Form1->Label1->Caption = u;

}

}

void \_\_fastcall TForm1::FormMouseDown(TObject \*Sender, TMouseButton Button,

TShiftState Shift, int X, int Y)

{

u =0;

no = 4;

n = no-1;

cpx = xk[0];

cpy = yk[0];

xk[count] = X;

yk[count] = Y;

Form1->Canvas-> Pixels[xk[count]][yk[count]]

=clRed;

count++;

if(count==1){

Shape3->Left = xk[0];

Shape3->Top = yk[0];

}

else if(count==2){

Shape4->Left = xk[1];

Shape4->Top = yk[1];

}

else if(count==3){

Shape5->Left = xk[2];

Shape5->Top = yk[2];

}

else if(count==4){

Shape6->Left = xk[3];

Shape6->Top = yk[3];

}

if(count >3){

Form1->Timer1->Enabled = true;

count =0;

Form1->Refresh();

}

}

void \_\_fastcall TForm1::FormCreate(TObject \*Sender)

{

u = 0.0;

}