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Psuedocode Gambaran Umum Sistem

Tampilan Utama Aplikasi

Klik Menu

Muncul pilihan Sub Menu

If {Prime Generator}   //Akan masuk ke menu pembangkitan kunci

Else {

If {Enkripsi}   //Akan masuk ke menu enkripsi

Else {

If {Deskripsi} //Akan masuk ke menu deskripsi

Else {

If {About} //Akan masuk ke menu kredit/tentang aplikasi

}

End

}

Menu Generate Kunci

```
long q,beta,i=0,a,alpha; // varibel penampung kunci public & privat
int prima; // variabel penampung bilangan prima
int[] bin; //  varibel bilangan biner
Random r1 =new Random(); //variabel penampung bilangan acak
long sam(long x, long y, long z)
{
   long r; // varibel bilang acak
   int [] bin = new int[32]; // konversi tipe data biner ke integer
   int i; // varibel nilai awal

   kondisi( y > 0 )
   {
      jika (y % 2 == 0) // nilai y di modulus 2 hasilnya 0
      {
```

```
        bin[i] = 0; // maka biner bernilai 0 "bukan prima"
      }
    maka jika tidak
    {
        bin[i] = 1; // maka biner bernilai 1 "prima"
    }
  apabila bilangan bernilai prima  y = y/2; // nilai y dibagi 2
    dan seterusnya ditambah 1
}
  apabila bilangan bukan prima dan seterusnya dikurang 1

  setelah kunci di dapat maka kunci selanjutnya di simpan.

  Menu Enkripsi

string metode; // tipe data pengubah kata menjadi angka
int p,alpha,a,beta; // varibel penampung kunci publik
Random r =new Random(); // variabel penampung bilangan acak

    int sam(int x, int y, int z) // varibel x,y,z
{
    int r; //varibel penampung hasil bilangan random
    int [] bin = new int[32]; //konversi tipe data dari biner ke integer
    int i; // varibel penentuan nilai awal
      i = 0; // dimulai dari nol

setiap huruf dirubah menjadi angka dan di enkripsi menggunkan formula
sebagai berikut :

  kondisi( y > 0 )
  {
    jika (y % 2 == 0) // nilai y di modulus 2 hasilnya 0
    {
        bin[i] = 0; // maka biner bernilai 0 "bukan prima"
    }
    maka jika tidak
    {
        bin[i] = 1; // maka biner bernilai 1 "prima"
    }
  apabila bilangan bernilai prima  y = y/2; // nilai y dibagi 2
    dan seterusnya ditambah 1
}
  apabila bilangan bukan prima dan seterusnya dikurang 1
```

```
        jika (i>0) // nilai i lebih besar dari nol
    {
       r = (r * r) % z; // rumus enkripsi
       Jika (r<0) // nilai r lebih kecil dari nol
       {
          r=r*-1; // rumus enkripsi
       }
       Jika ( bin[--i] == 1 ) // nilai i sama dengan 1
       {
          r = (r * x) % z; // rumus enkripsi
       }
    }
    return r; // looping ke nilai r sampai proses enkripsi selesai
}
```

Menu Deskripsi

```
 int[] p1 = new int[c1.Length]; // varibel penampung konversi plainteks yang akan
dikembalikan
    int[] d1 = new int[c1.Length]; // varibel penampung hasil deskripsi
    string temp=" "; // varibel penampung string
    for(int i=0;i<c1.Length;i++) // pendeklarasian
    {
       p1[i]=c2[i] * sam(c1[i],(p-1-a),p) % p; // rumus pendeskripsian per angka
       d1[i]=sam(c1[i],(p-1-a),p); // rumus penerjemahan kalimat
    maka pendeskripsian selesai.
```

SOURCE CODE PROGRAM

MENU

```csharp
using System;
using System.Drawing;
using System.Windows.Forms;

namespace ProgramSkripsi
{
    public partial class Menu : Form
    {
        public Menu()
        {
            InitializeComponent();
        }
        void Btn_pembangkit_kunciClick(object sender, EventArgs e)
        {
            PembangkitKunci a = new PembangkitKunci();
            a.Show();
            this.Hide();
        }
        void Btn_enkripsiClick(object sender, EventArgs e)
        {
            Enkripsi a = new Enkripsi();
            a.Show();
            this.Hide();
        }
        void Btn_dekripsiClick(object sender, EventArgs e)
        {
            Dekripsi a = new Dekripsi();
            a.Show();
            this.Hide();
        }
        void Button1Click(object sender, EventArgs e)
        {
            About a = new About();
            a.Show();
            this.Hide();
        }
    }
}
```

MAIN FORM

```csharp
usingSystem;
usingSystem.Collections.Generic;
usingSystem.Drawing;
using System.Windows.Forms;

namespace ProgramSkripsi
{
    public partial class MainForm : Form
    {
        public MainForm()
        {
            InitializeComponent();
        }
        void Btn_mulaiClick(object sender, EventArgs e)
        {
            Menu a = new Menu();
            a.Show();
            this.Hide();
        }
    }
}
```

PEMBANGKIT KUNCI

```csharp
using System;
using System.IO;
using System.Text;
using System.Drawing;
using System.Windows.Forms;
using System.Collections.Generic;
using System.Diagnostics;
using word = Microsoft.Office.Interop.Word ;

namespace ProgramSkripsi
{
    public partial class PembangkitKunci : Form
    {
        public PembangkitKunci()
        {
            InitializeComponent();
        }
```

```
long q,beta,i=0,a,alpha;
int prima;
int[] bin;
Random r1 =new Random();
long sam(long x, long y, long z)
{
   long r;
   int [] bin = new int[32];
   int i;
   r = x;
   i = 0;
   while( y > 0 )
   {
      if (y % 2 == 0)
      {
         bin[i] = 0;
      }
      else
      {
         bin[i] = 1;
      }
      y = y/2;
      i++;
   }
   i--;
   while(i>0)
   {
      r = (r * r) % z;
      if (r<0)
      {
         r=r*-1;
      }
      if( bin[--i] == 1 )
      {
         r = (r * x) % z;
      }
   }
   return r;
}
int bilprima()
{
   Ulang:
   long hasil;
   int p=0,d=0,x=0,a;
   bool[] b = new bool[10000];;
```

```
            bool cekprima=false;
            while (cekprima==false)
            {
                p=(r1.Next(256,10000));
                x=p;
                for (i=1; i<=p; i++)
                {
                    b[i] = false;
                }
                while (x>0)
                {
                    x=x/10;
                    d=d+1;
                }
                while (d>0)
                {
                    Lagi:
                    a = (r1.Next(2,p-2));
                    if(b[a] == false)
                    {
                        b[a] = true;
                    }
                    else
                    {
                        goto Lagi;
                    }
                    hasil = sam(a,p-1,p);
                    if (hasil == 1)
                    {
                        d=d-1;
                    }
                    else
                    {
                        goto Ulang;
                    }
                }
                cekprima=true;
            }
            return p;
        }
        long el_primitive(int prima, long q)
        {
            long ran=0;
            long cek1, cek2;
            bool cekprimitive=false;
```

```csharp
    while(cekprimitive==false)
    {
        ran=r1.Next(2,prima-1);
        cek1=sam(ran,2,prima);
        cek2=sam(ran,q,prima);
        if (cek1!=1 && cek2!=1)
            cekprimitive=true;
    }
    return ran;
}
void Btn_generateClick(object sender, EventArgs e)
{
    prima=bilprima();
    q=(prima-1)/2;
    alpha=el_primitive(prima,q);
    a=r1.Next(2,prima-2);
    beta=sam(alpha,a,prima);
    nilai_p.Text=prima.ToString();
    nilai_alpha.Text=alpha.ToString();
    nilai_a.Text=a.ToString();
    nilai_beta.Text=beta.ToString();
}
void Btn_simpanClick(object sender, EventArgs e)
{
    SaveFileDialog simpanKunciPublicElGamal = new SaveFileDialog();
    simpanKunciPublicElGamal.Filter = "Kunci Public ElGamal
(*.KunciPublic)|*.KunciPublic";
    simpanKunciPublicElGamal.Title = "Simpan Kunci Public ElGamal";

    SaveFileDialog simpanKunciPrivateElGamal = new SaveFileDialog();
    simpanKunciPrivateElGamal.Filter = "Kunci Private ElGamal
(*.KunciPrivate)|*.KunciPrivate";
    simpanKunciPrivateElGamal.Title = "Simpan Kunci Private ElGamal";
    if(simpanKunciPublicElGamal.ShowDialog()==DialogResult.OK)
    {
        StreamWriter writer = new
StreamWriter(simpanKunciPublicElGamal.OpenFile());
        writer.WriteLine(nilai_p.Text);
        writer.WriteLine(nilai_alpha.Text);
        writer.WriteLine(nilai_beta.Text);
        writer.Dispose();
        writer.Close();
    }
    if(simpanKunciPrivateElGamal.ShowDialog()==DialogResult.OK)
    {
```

```csharp
        StreamWriter writer = new
StreamWriter(simpanKunciPrivateElGamal.OpenFile());
        writer.WriteLine(nilai_a.Text);
        writer.Dispose();
        writer.Close();
    }
    MessageBox.Show("Anda Berhasil Menyimpan Kunci");
}
void Btn_kembaliClick(object sender, EventArgs e)
{
    Menu b = new Menu();
    b.Show();
    this.Hide();
}
    }
}
```

ENKRIPSI

```csharp
using System;
using System.IO;
using System.Text;
using System.Drawing;
using System.Windows.Forms;
using System.Collections.Generic;
using System.Diagnostics;
using word = Microsoft.Office.Interop.Word;

namespace ProgramSkripsi
{
    public partial class Enkripsi : Form
    {
        string metode;
        int p,alpha,a,beta;
        Random r =new Random();
        int[] c1;
        int[] c2;
        public Enkripsi()
        {
```

```
        InitializeComponent();
}
int sam(int x, int y, int z)
{
    int r;
    int [] bin = new int[32];
    int i;
    r = x;
    i = 0;
    while( y > 0 )
    {
        if (y % 2 == 0)
        {
            bin[i] = 0;
        }
        else
        {
            bin[i] = 1;
        }
        y = y/2;
        i++;
    }
    i--;
    while(i>0)
    {
        r = (r * r) % z;
        if (r<0)
        {
            r=r*-1;
        }
        if( bin[--i] == 1 )
        {
            r = (r * x) % z;
        }
    }
    return r;
}
void Btn_browseClick(object sender, EventArgs e)
{
```

```csharp
        open.Filter = "Document (MsWord)|*.docx";
        open.Title = "Open File : ";
        open.FileName = "";
        open.RestoreDirectory = true;
        if(open.ShowDialog() == DialogResult.OK)
        {
            metode = open.FileName.Substring (open.FileName.Length-4,4);
            string dirName = System.IO.Path.GetDirectoryName(open.FileName);
            string drive =
dirName.Split(System.IO.Path.VolumeSeparatorChar)[1];
            cari.Text = dirName + "\\" + open.SafeFileName.ToString();
        }
        var timerDocx = new Stopwatch();
        timerDocx.Start();
        try
        {
            object miss= System.Reflection.Missing.Value;
            object readOnly= true;
            object filenameO = cari.Text.ToString();
            Microsoft.Office.Interop.Word.Application word = new
Microsoft.Office.Interop.Word.ApplicationClass();
            Microsoft.Office.Interop.Word.Document docs =
word.Documents.Open(ref filenameO, ref miss, ref readOnly, ref miss, ref miss,
ref miss, ref miss, ref miss,ref miss, ref miss, ref miss, ref miss, ref miss, ref
miss, ref miss, ref miss);
            docs.ActiveWindow.Selection.WholeStory();
            docs.ActiveWindow.Selection.Copy();
            IDataObject data =
System.Windows.Forms.Clipboard.GetDataObject();
            String fileText =
data.GetData(System.Windows.Forms.DataFormats.Text).ToString();
            System.Windows.Forms.Clipboard.SetDataObject(string.Empty);
            string plainText = data.GetData(DataFormats.Text).ToString();
            plaintext.Text = plainText;
            jumlahkarakter.Text = plainText.Length.ToString();
            timerDocx.Stop();
            waktuproses1.Text=
(int.Parse(timerDocx.Elapsed.ToString("fffffff"))/10000f).ToString();
        }
```

```csharp
    catch(Exception err)
    {
       MessageBox.Show(err.Message);
    }
}
void Btn_importClick(object sender, EventArgs e)
{
   string [] tampung = new string[4];
   dialog = new OpenFileDialog();
   dialog.Filter = "Kunci Public ElGamal (*.KunciPublic)|*.KunciPublic";
   if(dialog.ShowDialog() == DialogResult.OK)
   {
      StreamReader sr =new StreamReader(dialog.FileName);
      for(int i=0;i<3;i++)
      {
         tampung[i]=sr.ReadLine();
      }
   }
   if(dialog.FileName!="")
   {
      p=Convert.ToInt32(tampung[0]);
      alpha=Convert.ToInt32(tampung[1]);
      beta=Convert.ToInt32(tampung[2]);
      nilai_p.Text=p.ToString();
      nilai_alpha.Text=alpha.ToString();
      nilai_beta.Text=beta.ToString();
   }
}
void Btn_enkripsi_kunciClick(object sender, EventArgs e)
{
   var timerEnkKun = new Stopwatch();
   timerEnkKun.Start();
   int k = 0,y=0;
   string temp=" ";
   c1 = new int[plaintext.Text.Length];
   c2 = new int[plaintext.Text.Length];
   for(int i=0;i<plaintext.Text.Length;i++)
   {
      k = r.Next(2,(p-1));
```

```
            temp=temp+" "+k.ToString();
            nilai.Text= temp.ToString();
            c1[i]=sam(alpha,k,p);
            nilai_r.Text+=c1[i]+" ";
            c2[i]=(plaintext.Text[i]*(sam(beta,k,p)))%p;
            nilai_t.Text+=c2[i]+" ";
        }
        timerEnkKun.Stop();
        waktuproses3.Text=(int.Parse(timerEnkKun.Elapsed.ToString("fffffff"))/
10000f).ToString();
    }
    void Btn_simpan2Click(object sender, EventArgs e)
    {
        string txt = nilai_r.Text+"\n"+nilai_t.Text+"\n"+p+"\n";
        SaveFileDialog save = new SaveFileDialog();
        save.Filter = "txt files|*.txt";
        save.ShowDialog();
        if(save.FileName!="")
        {
            StreamWriter writer = new StreamWriter(save.OpenFile());
            writer.WriteLine(nilai_r.Text);
            writer.WriteLine(nilai_t.Text);
            writer.WriteLine(nilai_p.Text);
            writer.Dispose();
            writer.Close();
        }
    }
    void Btn_kembaliClick(object sender, EventArgs e)
    {
        Menu a = new Menu();
        a.Show();
        this.Hide();
    }
    void Label5Click(object sender, EventArgs e)
    {

    }
  }
}
```

DEKRIPSI

```csharp
namespace ProgramSkripsi
{
    partial class Dekripsi
    {
        /// <summary>
        /// Designer variable used to keep track of non-visual components.
        /// </summary>
        private System.ComponentModel.IContainer components = null;
        private System.Windows.Forms.Label label1;
        private System.Windows.Forms.Label label2;
        private System.Windows.Forms.TextBox nilai_p;
        private System.Windows.Forms.Label label3;
        private System.Windows.Forms.TextBox nilai_a;
        private System.Windows.Forms.Label label4;
        private System.Windows.Forms.Label label5;
        private System.Windows.Forms.RichTextBox nilai_r;
        private System.Windows.Forms.RichTextBox nilai_t;
        private System.Windows.Forms.Button btn_browse;
        private System.Windows.Forms.OpenFileDialog open;
        private System.Windows.Forms.Button btn_dekripsi_kunci;
        private System.Windows.Forms.Label label6;
        private System.Windows.Forms.Label label7;
        private System.Windows.Forms.TextBox waktuproses1;
        private System.Windows.Forms.Button btn_kembali;
        private System.Windows.Forms.OpenFileDialog dialog;
        private System.Windows.Forms.Label label11;
        private System.Windows.Forms.PictureBox pictureBox1;
        private System.Windows.Forms.Label label15;
        private System.Windows.Forms.Button btn_private;
        private System.Windows.Forms.RichTextBox kunci;
        private System.Windows.Forms.Button btn_simpan;

        /// <summary>
        /// Disposes resources used by the form.
        /// </summary>
```

```
/// <param name="disposing">true if managed resources should be
disposed; otherwise, false.</param>
protected override void Dispose(bool disposing)
{
    if (disposing) {
        if (components != null) {
            components.Dispose();
        }
    }
    base.Dispose(disposing);
}


/// <summary>
/// This method is required for Windows Forms designer support.
/// Do not change the method contents inside the source code editor. The
Forms designer might
/// not be able to load this method if it was changed manually.
/// </summary>
private void InitializeComponent()
{
    System.ComponentModel.ComponentResourceManager resources = new
System.ComponentModel.ComponentResourceManager(typeof(Dekripsi));
    this.label1 = new System.Windows.Forms.Label();
    this.label2 = new System.Windows.Forms.Label();
    this.nilai_p = new System.Windows.Forms.TextBox();
    this.label3 = new System.Windows.Forms.Label();
    this.nilai_a = new System.Windows.Forms.TextBox();
    this.label4 = new System.Windows.Forms.Label();
    this.label5 = new System.Windows.Forms.Label();
    this.btn_browse = new System.Windows.Forms.Button();
    this.open = new System.Windows.Forms.OpenFileDialog();
    this.btn_dekripsi_kunci = new System.Windows.Forms.Button();
    this.label6 = new System.Windows.Forms.Label();
    this.label7 = new System.Windows.Forms.Label();
    this.waktuproses1 = new System.Windows.Forms.TextBox();
    this.btn_kembali = new System.Windows.Forms.Button();
    this.dialog = new System.Windows.Forms.OpenFileDialog();
    this.label11 = new System.Windows.Forms.Label();
    this.label15 = new System.Windows.Forms.Label();
```

```
this.btn_private = new System.Windows.Forms.Button();
this.nilai_r = new System.Windows.Forms.RichTextBox();
this.nilai_t = new System.Windows.Forms.RichTextBox();
this.kunci = new System.Windows.Forms.RichTextBox();
this.btn_simpan = new System.Windows.Forms.Button();
this.pictureBox1 = new System.Windows.Forms.PictureBox();
((System.ComponentModel.ISupportInitialize)(this.pictureBox1)).BeginInit();
this.SuspendLayout();
//
// label1
//
this.label1.BackColor = System.Drawing.Color.DarkTurquoise;
this.label1.Font = new System.Drawing.Font("MS Reference Sans Serif",
10F, System.Drawing.FontStyle.Regular, System.Drawing.GraphicsUnit.Point,
((byte)(0)));
this.label1.Location = new System.Drawing.Point(6, 113);
this.label1.Name = "label1";
this.label1.Size = new System.Drawing.Size(1134, 28);
this.label1.TabIndex = 0;
this.label1.Text = "   Dekripsi Pesan";
//
// label2
//
this.label2.Location = new System.Drawing.Point(15, 162);
this.label2.Name = "label2";
this.label2.Size = new System.Drawing.Size(100, 22);
this.label2.TabIndex = 1;
this.label2.Text = "p ";
//
// nilai_p
//
this.nilai_p.Location = new System.Drawing.Point(49, 162);
this.nilai_p.Name = "nilai_p";
this.nilai_p.Size = new System.Drawing.Size(180, 26);
this.nilai_p.TabIndex = 2;
//
// label3
//
```

```
this.label3.Location = new System.Drawing.Point(264, 162);
this.label3.Name = "label3";
this.label3.Size = new System.Drawing.Size(100, 22);
this.label3.TabIndex = 3;
this.label3.Text = "a ";
//
// nilai_a
//
this.nilai_a.Location = new System.Drawing.Point(303, 162);
this.nilai_a.Name = "nilai_a";
this.nilai_a.Size = new System.Drawing.Size(180, 26);
this.nilai_a.TabIndex = 4;
//
// label4
//
this.label4.Location = new System.Drawing.Point(15, 202);
this.label4.Name = "label4";
this.label4.Size = new System.Drawing.Size(100, 23);
this.label4.TabIndex = 5;
this.label4.Text = "r ";
//
// label5
//
this.label5.Location = new System.Drawing.Point(15, 314);
this.label5.Name = "label5";
this.label5.Size = new System.Drawing.Size(100, 23);
this.label5.TabIndex = 6;
this.label5.Text = "t ";
//
// btn_browse
//
this.btn_browse.BackColor = System.Drawing.Color.Silver;
this.btn_browse.Location = new System.Drawing.Point(1005, 148);
this.btn_browse.Name = "btn_browse";
this.btn_browse.Size = new System.Drawing.Size(91, 36);
this.btn_browse.TabIndex = 9;
this.btn_browse.Text = "Browse";
this.btn_browse.UseVisualStyleBackColor = false;
this.btn_browse.Click += new
```

```
System.EventHandler(this.Btn_browseClick);
        //
        // open
        //
        this.open.FileName = "openFileDialog1";
        //
        // btn_dekripsi_kunci
        //
        this.btn_dekripsi_kunci.BackColor = System.Drawing.Color.LightCoral;
        this.btn_dekripsi_kunci.Location = new System.Drawing.Point(1005,
457);
        this.btn_dekripsi_kunci.Name = "btn_dekripsi_kunci";
        this.btn_dekripsi_kunci.Size = new System.Drawing.Size(91, 58);
        this.btn_dekripsi_kunci.TabIndex = 10;
        this.btn_dekripsi_kunci.Text = "Dekripsi Kunci";
        this.btn_dekripsi_kunci.UseVisualStyleBackColor = false;
        this.btn_dekripsi_kunci.Click += new
System.EventHandler(this.Btn_dekripsi_kunciClick);
        //
        // label6
        //
        this.label6.Font = new System.Drawing.Font("MS Reference Sans Serif",
8F, System.Drawing.FontStyle.Regular, System.Drawing.GraphicsUnit.Point,
((byte)(0)));
        this.label6.Location = new System.Drawing.Point(5, 419);
        this.label6.Name = "label6";
        this.label6.Size = new System.Drawing.Size(100, 23);
        this.label6.TabIndex = 11;
        this.label6.Text = "Plaintext";
        //
        // label7
        //
        this.label7.Font = new System.Drawing.Font("MS Reference Sans Serif",
8F, System.Drawing.FontStyle.Regular, System.Drawing.GraphicsUnit.Point,
((byte)(0)));
        this.label7.Location = new System.Drawing.Point(5, 528);
        this.label7.Name = "label7";
        this.label7.Size = new System.Drawing.Size(100, 23);
        this.label7.TabIndex = 13;
```

```
this.label7.Text = "Waktu ";
//
// waktuproses1
//
this.waktuproses1.Location = new System.Drawing.Point(112, 525);
this.waktuproses1.Name = "waktuproses1";
this.waktuproses1.Size = new System.Drawing.Size(200, 26);
this.waktuproses1.TabIndex = 14;
//
// btn_kembali
//
this.btn_kembali.BackColor = System.Drawing.Color.Gold;
this.btn_kembali.Location = new System.Drawing.Point(1005, 528);
this.btn_kembali.Name = "btn_kembali";
this.btn_kembali.Size = new System.Drawing.Size(91, 38);
this.btn_kembali.TabIndex = 32;
this.btn_kembali.Text = "Kembali";
this.btn_kembali.UseVisualStyleBackColor = false;
this.btn_kembali.Click += new
System.EventHandler(this.Btn_kembaliClick);
//
// dialog
//
this.dialog.FileName = "openFileDialog1";
//
// label11
//
this.label11.Font = new System.Drawing.Font("MS Reference Sans
Serif", 9F, System.Drawing.FontStyle.Regular,
System.Drawing.GraphicsUnit.Point, ((byte)(0)));
this.label11.ImageAlign = System.Drawing.ContentAlignment.TopLeft;
this.label11.Location = new System.Drawing.Point(129, 9);
this.label11.Name = "label11";
this.label11.Size = new System.Drawing.Size(462, 88);
this.label11.TabIndex = 47;
this.label11.Text = "FAKULTAS SAINS DAN TEKNOLOGI
\r\nUNIVERSITAS ISLAM NEGERI SUMATERA UTARA";
this.label11.TextAlign = System.Drawing.ContentAlignment.MiddleLeft;
//
```

```
// label15
//
this.label15.Font = new System.Drawing.Font("MS Reference Sans
Serif", 9F, System.Drawing.FontStyle.Regular,
System.Drawing.GraphicsUnit.Point, ((byte)(0)));
this.label15.Location = new System.Drawing.Point(721, 14);
this.label15.Margin = new System.Windows.Forms.Padding(4, 0, 4, 0);
this.label15.Name = "label15";
this.label15.Size = new System.Drawing.Size(383, 83);
this.label15.TabIndex = 45;
this.label15.Text = "Pengamanan Data Teks Menggunakan\r\nAlgoritma
Prime Generator Fermat \r\ndan Algoritm" +
    "a ElGamal";
this.label15.TextAlign =
System.Drawing.ContentAlignment.MiddleCenter;
//
// btn_private
//
this.btn_private.BackColor = System.Drawing.Color.Silver;
this.btn_private.Location = new System.Drawing.Point(892, 148);
this.btn_private.Name = "btn_private";
this.btn_private.Size = new System.Drawing.Size(91, 36);
this.btn_private.TabIndex = 48;
this.btn_private.Text = "Private";
this.btn_private.UseVisualStyleBackColor = false;
this.btn_private.Click += new
System.EventHandler(this.Btn_privateClick);
//
// nilai_r
//
this.nilai_r.Location = new System.Drawing.Point(48, 199);
this.nilai_r.Name = "nilai_r";
this.nilai_r.Size = new System.Drawing.Size(935, 96);
this.nilai_r.TabIndex = 49;
this.nilai_r.Text = "";
//
// nilai_t
//
this.nilai_t.Location = new System.Drawing.Point(48, 311);
```

```
        this.nilai_t.Name = "nilai_t";
        this.nilai_t.Size = new System.Drawing.Size(935, 96);
        this.nilai_t.TabIndex = 50;
        this.nilai_t.Text = "";
        //
        // kunci
        //
        this.kunci.Location = new System.Drawing.Point(112, 419);
        this.kunci.Name = "kunci";
        this.kunci.Size = new System.Drawing.Size(871, 96);
        this.kunci.TabIndex = 51;
        this.kunci.Text = "";
        //
        // btn_simpan
        //
        this.btn_simpan.BackColor = System.Drawing.Color.YellowGreen;
        this.btn_simpan.Location = new System.Drawing.Point(880, 528);
        this.btn_simpan.Name = "btn_simpan";
        this.btn_simpan.Size = new System.Drawing.Size(103, 38);
        this.btn_simpan.TabIndex = 52;
        this.btn_simpan.Text = "Simpan";
        this.btn_simpan.UseVisualStyleBackColor = false;
        this.btn_simpan.Click += new
System.EventHandler(this.Btn_simpanClick);
        //
        // pictureBox1
        //
        this.pictureBox1.Image =
((System.Drawing.Image)(resources.GetObject("pictureBox1.Image")));
        this.pictureBox1.Location = new System.Drawing.Point(18, 6);
        this.pictureBox1.Name = "pictureBox1";
        this.pictureBox1.Size = new System.Drawing.Size(103, 88);
        this.pictureBox1.SizeMode =
System.Windows.Forms.PictureBoxSizeMode.StretchImage;
        this.pictureBox1.TabIndex = 53;
        this.pictureBox1.TabStop = false;
        //
        // Dekripsi
        //
```

```
        this.AutoScaleDimensions = new System.Drawing.SizeF(9F, 20F);
        this.AutoScaleMode = System.Windows.Forms.AutoScaleMode.Font;
        this.BackColor = System.Drawing.SystemColors.GradientActiveCaption;
        this.ClientSize = new System.Drawing.Size(1112, 567);
        this.Controls.Add(this.pictureBox1);
        this.Controls.Add(this.btn_simpan);
        this.Controls.Add(this.kunci);
        this.Controls.Add(this.nilai_t);
        this.Controls.Add(this.nilai_r);
        this.Controls.Add(this.btn_private);
        this.Controls.Add(this.label11);
        this.Controls.Add(this.label15);
        this.Controls.Add(this.btn_kembali);
        this.Controls.Add(this.waktuproses1);
        this.Controls.Add(this.label7);
        this.Controls.Add(this.label6);
        this.Controls.Add(this.btn_dekripsi_kunci);
        this.Controls.Add(this.btn_browse);
        this.Controls.Add(this.label5);
        this.Controls.Add(this.label4);
        this.Controls.Add(this.nilai_a);
        this.Controls.Add(this.label3);
        this.Controls.Add(this.nilai_p);
        this.Controls.Add(this.label2);
        this.Controls.Add(this.label1);
        this.Name = "Dekripsi";
        this.Text = " Dekripsi";
        ((System.ComponentModel.ISupportInitialize)(this.pictureBox1)).EndInit
();

        this.ResumeLayout(false);
        this.PerformLayout();

    }
    }
}
```
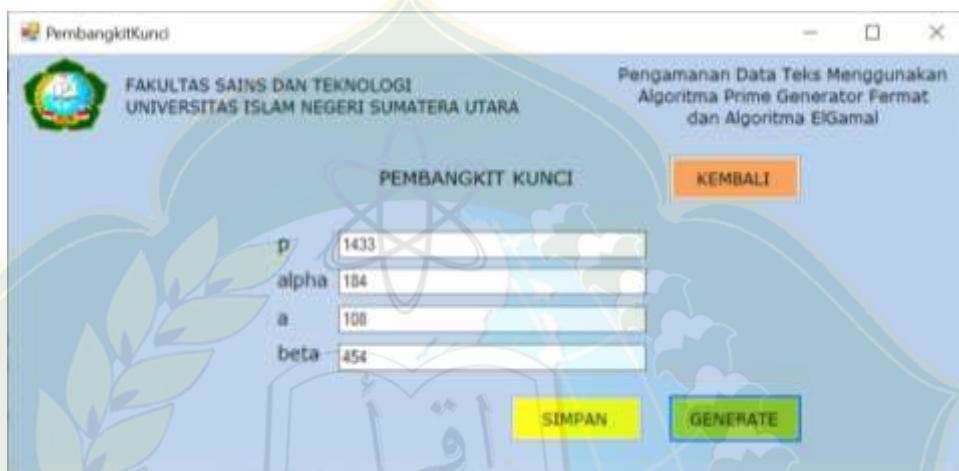
LAMPIRAN II

OBJEK LAIN IIMPLEMENTASI PROGRAM

Pengujian tambahan ini menggunakan data teks yang lebih banyak. Dengan jumlah karakter 3200.

1. **Pembangkit Kunci**

2. **Enkripsi**

3. Dekripsi

ANDRE GUSLI

BACHELOR OF COMPUTER SCIENCE
ABOUT

Bachelor of Computer Science focus on data security. Experienced, Project Manager, IT Support and Public Relations Officer with a demonstrated history of working in the Startup industry. Skilled in Decision-Making, Computer and Network, Data Security, Management, Writing, Leadership, Negotiation and Web Content Writing. Strong business development professional graduated from UIN Sumatera Utara.

PERSONAL INFORMATION

Phone   : +628 5762415365
Email   : andregusli8@gmail.com
LinkedIn : Andre Gusli
Instagram : lelakilangit_99
Born   : Tembung, May 31th 1998
Address   : Jl Kramat Lontar Gg VIII
Rt : 09 / Rw : 01 No. E395, Paseban, Senen, Jakarta Pusat. 10440.

EDUCATION

2016-2021 Bachelor of Computer Science, Faculty Science and Technology, State Islamic University of Sumatera Utara. GPA 3.62.

2013-2016 Vocational High School of Cerdas Murni major on Computer and Network.

SKILLS

Project Management
People Management
Graphic Design
Computer and Network
Programing
Organization Development
Critical Thinking
Public Speaking
Teamwork
Leadership
Public Relations
Decision Making
Negotiation
Ms.Office (Word, Excel, Ppt)

SCHOLARSHIP

2018-2020 Central of Bank Indonesia Scholarship
2017-2019 YBM BRI Scholarship
2017-2018 PPA Scholarship

INTERNSHIP & WORK EXPERIENCE

PT. FRISIDEA TECHNOLOGY AS A PROJECT MANAGER
August 2021 - Now
- *- Creating Workflow and BRD (Business Requirementss Document) before starting the project*
- *- Testing and creating bugs report*
- *- Ensuring the project is completed on time*
- *- Coordinate with the team for each project target*
- *- Project management through JIRA*

STARTUP SEMUD AS A CHIEF PUBLIC RELATION OFFICER
February 2020 - Juli 2021
- *Build relationships with schools and parents of students who will be users of semud.id*

PT.JASA MARGA PERSERO.TBK CABANG BELMERA AS A STAFF IT DIVISION
September 2019-December 2019 (Internship)
- *Manage the data of every vehicle that enters the toll road along with its transactions*

ORGANIZATIONS

2019-2021 INDONESIAN SCIENTIST & TECHNOLOGIST COMMUNITY CENTER - STUDENT CLUSTER AS A SUMBAGUT REGIONAL COORDINATOR
2018-2020 STUDENT RESEARCH AND SCIENTIFIC INSTITUTIONS AS A PRESIDENT
2018-2020 NEW GENERATION OF INDONESIA AS A HEAD OF EDUCATION DIVISION

ACHIEVEMENTS

2019 THE MOST OUTSTANDING STUDENT OF SAINS AND TECHNOLOGY FACULTY, UINSU
2017 THE 2nd WINNER OF FACULTY SAINS AND TECHNOLOGY PAPER COMPETITION
2017 THE 1st WINNER OF IT COMPETITION, UINSU

VOLUNTEER

2019-2021 NATIONAL CHILDREN FORUM AS A FACILITATOR, WEBSITE TEAM AND CODE OF ETHICS TEAM
This organization under the ministry of women empowerment and child protection of the Republic of Indonesia.

VI	7 Agustus 2020	REVISI BAB II		5 Agustus 2020	REVISI BAB IV
VII	30 Agustus 2020	REVISI BAB V		12 Agustus 2020	REVISI BAB V
VIII	30 September 2020	REVISI KESIMPULAN DAFTAR PUSTAKA		19 September 2020	REVISI KESIMPULAN
IX	21 Oktober 2020	ACC SEMUA BAB		19 Oktober 2020	ACC SEMUA BAB
X	21 Oktober 2020	ACC SIDANG		19 Oktober 2020	ACC SIDANG