LAMPIRAN

1. Sub Program Penjumlahan Matrik

```
begin
  baca (jum_brs_a,  jum_klm_a,  jum_brs_b,  jum_klm_b);
  if ( jum_brs_a <> jum_brs_b ) or ( jum_klm_a <> jum_ klm _b ) then halt;
  .............
  .............
  write('matrik  hasil penjumlahan = ' );
  for i := 1 to jum_brs_a do
    for j := 1 to jum_klm_a do
      begin
        c[i,j] := a[i,j]+b[i,j];
        write(c[i,j]:9:4);
      end;
  .............
  .............
end.
```

2. Sub Program Transformasi Matrik

```
begin
  baca (jum_brs_a,  jum_klm_a);
  baca (jum_brs_b,  jum_klm_b);
  if ( jum_brs_b <> jum_klm_a ) then halt;
  .............
  .............
  write('matrik C  hasil perkalian A x B  = '  );
  for i := 1 to jum_brs_a do
   for j := 1 to jum_klm_b do
    begin c[i,j]:=0;
     for k:=1 to jum_klm_a do
     begin
       c[i,j] := c[i,j] + a[i,k]*b[k,j];
       gotoxy(23+6*j,5+x+i);
        write(c[i,j]:9:4);
     end;
    end;
  .............
  .............
end.
```

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3. Sub Program Transformasi Matrik

```
begin
   baca (jum_brs_a,  jum_klm_a);
   .............
   .............
   write('matrik B  hasil transformasi   matrik A  = ' );
   for i := 1 to jum_klm_a do
      for j := 1 to jum_brs_a do
       begin
         b[i,j] := a[j,i];
         gotoxy(7*jum_klm_a+5*j,3+i);
         write(b[i,j]:7:2);
       end;
   .............
   .............
end.
```

4. Sub Program Dekomposisi LU

```
begin
   baca ( n=orde  matrik);            { inisialisasi matrik awal }
   for i := 1 to orde do
      for j := 1 to orde do
         begin
            matrik_l[i,j] := 0;   matrik_u[i,j] := 0;  matrik_l[i,i] := 1.0;
         end;
   .............
   .............
   for j := 1 to orde do
      begin
         for i := 1 to j do
            begin
               sum := 0;
               for k := 1 to i-1 do
                  sum := sum - matrik_l[i,k]*matrik_u[k,j];
               matrik_u[i,j] := a[i,j] + sum;
            end;
         j1 := j + 1;
         for i := j1 to orde do
            begin
               jum := 0;
               for k := 1 to j do
                  jum := jum -matrik_l[i,k] * matrik_u[k,j];
```

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```
                matrik_l[i,j] := (a[i,j] +jum)/matrik_u[j,j];
             end;
        end;
    .............
    .............
    { cetak matrik L dan U }
    clrscr;
    for i := 1 to orde do
        for j := 1 to orde do
            begin
                write(matrik_L[ i,j]);
                write(matrik_U[ i,j]);
        end;
    .............
    .............
end.
```

5. **Sub Program Determinan**

```
begin
    baca (n=orde  matrik);          { inisialisasi matrik awal }
    dekomposisi_LU;
    .............
    .............
    Det := 1;
    for j := 1 to orde do
        begin
            det := det * L(j,j)
            write(‘determinannya = ‘,  det);
        end;
    .............
    .............
end.
```

6. **Sub Program Invers**

```
begin
    baca (n=orde  matrik);          { inisialisasi matrik awal }
    dekomposisi_LU;
    .............
    .............
    for j := 1 to orde do           { $A = LU, A^{-1} = U^{-1} L^{-1}$ }
        begin
            L1 := invers_L;
```

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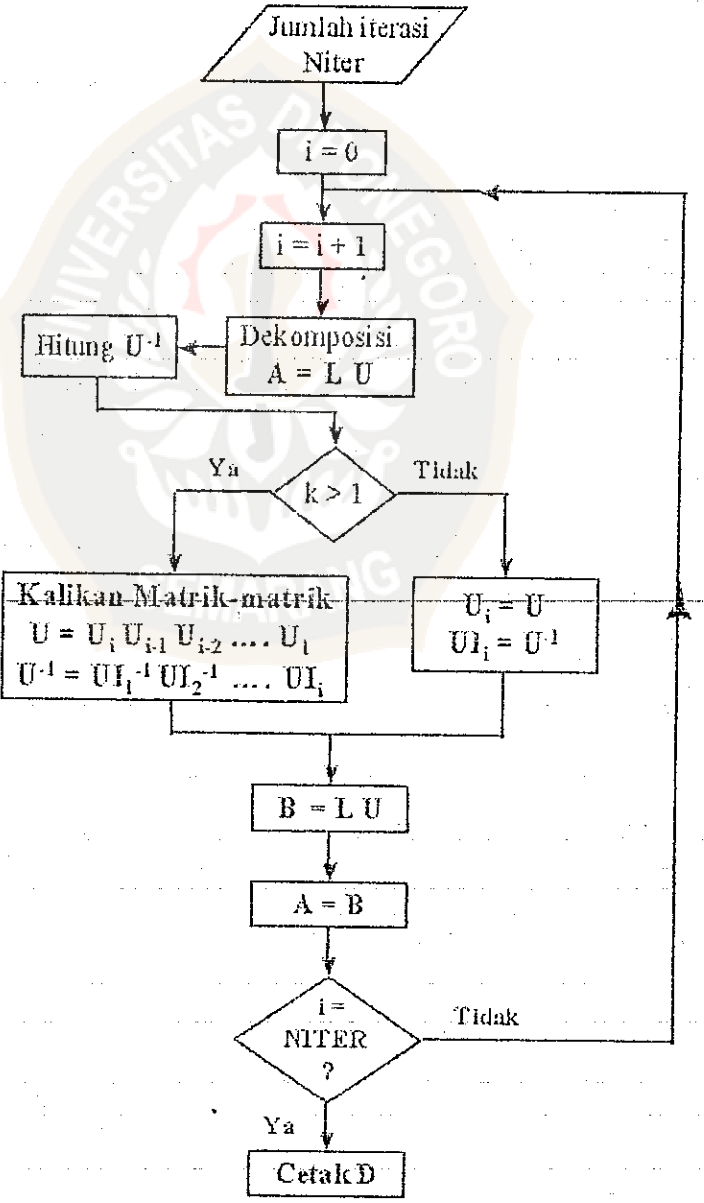
```
        U1 := invers_U;
        A_invers := Kali(U1,L1);
        write('Inversnya = ', A_invers);
      end;
    .............
    .............
  end.
```

7. **Diagram Alur Algoritma Rutishauser** { mencari harga eigen }



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