



LAMPIRAN PROGRAM

Lampiran

Judul Program	:	Eighqueen
Nama File	:	Eightqueen.Pas
Programmer	:	Nurma Evy Hendrayani
Nim	:	J 101 94 1039
Keperluan	:	Tugas Akhir
Compiler	:	Turbo Pascal Versi 7.0

```
Program eightqueen
uses crt;
type dim = array[1..8] of integer;
var i,n,k : integer;
    a : array [1..8] of boolean;
    b : array [2..16] of boolean;
    c : array [-7..7] of boolean;
    x : dim;

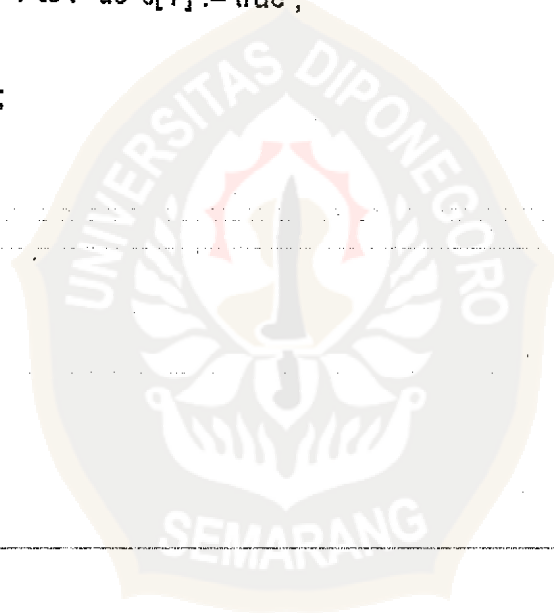
procedure print(x : dim ; n : integer);
var k : integer;
begin
    for k := 1 to 8 do
        write(x[k] : 4);
        writeln(' n = ', n : 3);
        readln;
    end;

procedure try(i : integer);
var j : integer;
begin
    for j := 1 to 8 do
        begin
            n := n+1;
            if a[j] and b[i+j] and c[i-j] then
                begin
                    x[i] := j;
                    a[j] := false;
                    b[i+j] := false;
                    c[i-j] := false;
                    if i < 8 then
                        try(i+1)
                    else
                        begin
                            print(x,n);
                            n := 0;
                        end;
                end;
        end;
end;
```

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```
        a[j] := true ;  
        b[i+j] := true ;  
        c[i-j] := true ;  
    end ;  
end ;  
end ;
```

```
{** Program Utama **}  
begin  
    clrscr ;  
    for i := 1 to 8 do a[i] := true ;  
    for i := 2 to 16 do b[i] := true ;  
    for i := -7 to 7 do c[i] := true ;  
    n := 0 ;  
    try(1) ;  
    readln ;  
end.
```



Judul Program	:	Eighqueen untuk satu Kasus
Nama File	:	Eightqueen.Pas
Programmer	:	Nurma Evy Hendrayani
Nim	:	J 101 94 1039
Keperluan	:	Tugas Akhir
Compiler	:	Turbo Pascal Versi 7.0

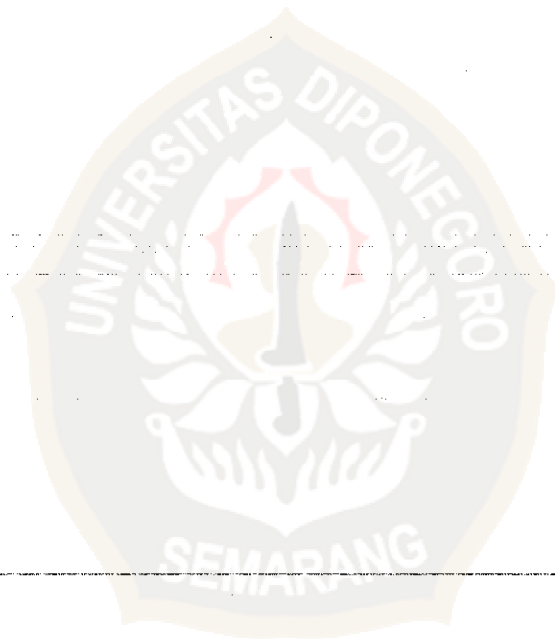
```
Program eightqueen
uses crt ;
type dim = array[1..8] of integer ;
var   i,n,k : integer ; q : boolean ;
      a : array [1..8] of boolean ;
      b : array [2..16] of boolean ;
      c : array [-7..7] of boolean ;
      x : array [1..8] of boolean ;

procedure try(i : integer ; var q : boolean) ;
var j : integer ;
begin
  j := 0 ;
  repeat
    n := n+1 ;
    j := j+1 ;
    q := false ;
    if (a[j] and b[i+j] and c[i-j]) then
      begin
        x[i] := j ;
        write('  x[', i, ']:', x[i]:2) ;
        write('  l = ', i:2) ;
        write('  j = ', j:2) ;
        a[j] := false ;
        b[i+j] := false ;
        c[i-j] := false ;

        if i < 8 then
          begin
            try(i+1, q) ;
            if not (q) then
              begin
                a[j] := true ;
                b[i+j] := true ;
                c[i-j] := true ;
              end ;
          end ;
      end ;
```

Lampiran

```
end
  else q := true ;
end
until ( q or ( j = 8 ) ) ;
end ;
```



Judul Program	:	Banyaknya Cara Penempatan Ratu
Nama File	:	Kombinasi Pas
Programmer	:	Nurma Evy Hendrayani
Nim	:	J 101 94 1039
Keperluan	:	Tugas Akhir
Compiler	:	Turbo Pascal Versi 7.0

```
Program Kombinasi(input, output) ;
uses crt ;
var   Ev, Pank, Fak_n, Fak_r, Fak_n-r, Komb : real ;
      Cacah, n, r : longint ;
```

```
Begin
  clrscr ;
  writeln(' Menghitung Kombinasi dari n dan r ' );
  write(' Nilai dari n : ' ); readln(n) ; writeln ;
  write(' Nilai dari r : ' ); readln(r) ; writeln ;
```

```
{menghitung faktorial n}
fak_n := 1 ;
for cacah := 1 to n do
  begin
    fak_n := fak_n * cacah ;
  end ;
```

```
{menghitung faktorial r}
fak_r := 1 ;
for cacah := 1 to r do
  begin
    fak_r := fak_r * cacah ;
  end ;
```

```
{menghitung faktorial n-r}
fak_n-r := 1 ;
for cacah := 1 to n-r do
  begin
    fak_n-r := fak_n-r * cacah ;
  end ;
```

```
end ;
```

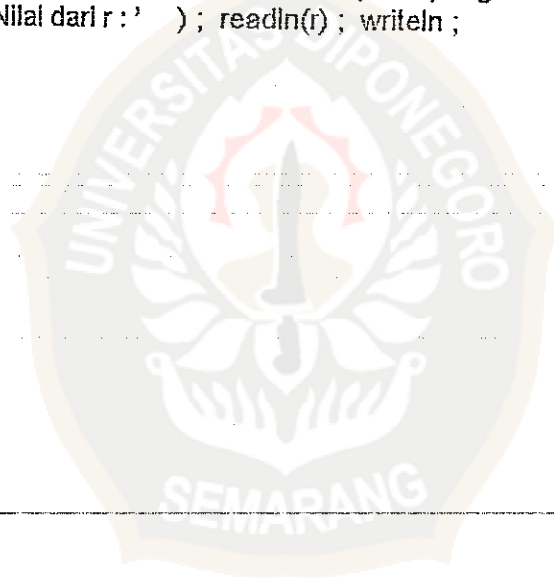
Lampiran

```
{ menghitung kombinasi }  
komb:= fakt_n / (fakt_r * fak_n-r);
```

```
{ menghitung n pangkat r }  
Ev := r * ln(n);  
Pangk := exp(Ev);
```

```
{ cetak hasil }
```

```
writeln(' Nilai dari faktorial n adalah :', fak_n : 1 : 1);  
writeln(' Nilai dari faktorial r adalah :', fak_r : 1 : 1);  
writeln(' Nilai dari faktorial n-r adalah :', fak_n-r : 1 : 1);  
writeln(' Nilai dari kombinasi dari n-r adalah :', komb : 1 : 1);  
writeln(' Nilai dari n pangkat r adalah :', pangk : 1 : 1);  
writeln(' Nilai dari r :' ); readln(r); writeln;  
readln;
```



92 SOLUSI
PERSOALAN DELAPAN RATU

1	5	8	6	3	7	2	4	n = 876
1	6	8	3	7	4	2	5	n = 264
1	7	4	6	8	2	5	3	n = 200
1	7	5	8	2	4	6	3	n = 136
2	4	6	8	3	1	7	5	n = 504
2	5	7	1	3	8	6	4	n = 400
2	5	7	4	1	8	6	3	n = 72
2	6	1	7	4	8	3	5	n = 280
2	6	8	3	1	4	7	5	n = 240
2	7	3	6	8	5	1	4	n = 264
2	7	5	8	1	4	6	3	n = 160
2	8	6	1	3	5	7	4	n = 336
3	1	7	5	8	2	4	6	n = 472
3	5	2	8	1	7	4	6	n = 216
3	5	2	8	6	4	7	1	n = 32
3	5	7	1	4	2	8	6	n = 40
3	5	8	4	1	7	2	6	n = 240
3	6	2	5	8	1	7	4	n = 80
3	6	2	7	1	4	8	5	n = 48
3	6	2	7	5	1	8	4	n = 24
3	6	4	1	8	5	7	2	n = 56
3	6	4	2	8	5	7	1	n = 40
3	6	8	1	4	7	5	2	n = 64
3	6	8	1	5	7	2	4	n = 24

Lampiran

3	6	8	2	4	1	7	5	n = 32
3	7	2	8	5	1	4	6	n = 216
3	7	2	8	6	4	1	5	n = 32
3	8	4	7	1	6	2	5	n = 368
4	1	5	8	2	7	3	6	n = 304
4	1	5	8	6	3	7	2	n = 24
4	2	5	8	6	1	3	7	n = 384
4	2	7	3	6	8	1	5	n = 72
4	2	7	3	6	8	5	1	n = 8
4	2	7	5	1	8	6	3	n = 32
4	2	8	5	7	1	3	6	n = 152
4	2	8	6	1	3	5	7	n = 40
4	6	1	5	2	8	3	7	n = 144
4	6	8	2	7	1	3	5	n = 128
4	6	8	3	1	7	5	2	n = 48
4	7	1	8	5	2	6	3	n = 248
4	7	3	8	2	5	1	6	n = 96
4	7	5	2	6	1	3	8	n = 64
4	7	5	3	1	6	8	2	n = 32
4	8	1	3	6	2	7	5	n = 104
4	8	1	5	7	2	6	3	n = 64
4	8	5	3	1	7	2	6	n = 168
5	1	4	6	8	2	7	3	n = 72
5	1	8	4	2	7	3	6	n = 168

Kampiran

5	1	8	6	3	7	2	4	n = 64
5	2	4	6	8	3	1	7	n = 104
5	2	4	7	3	8	6	1	n = 32
5	2	6	1	7	4	8	3	n = 64
5	2	8	1	4	7	3	6	n = 96
5	3	1	6	8	2	4	7	n = 248
5	3	1	7	2	8	6	4	n = 48
5	3	8	4	7	1	6	2	n = 128
5	7	1	3	8	6	4	2	n = 144
5	7	1	4	2	8	6	3	n = 40
5	7	2	4	8	1	3	6	n = 152
5	7	2	6	3	1	4	8	n = 32
5	7	2	6	3	1	8	4	n = 8
5	7	4	1	3	8	6	2	n = 72
5	8	4	1	3	6	2	7	n = 384
5	8	4	1	7	2	6	3	n = 24
6	1	5	2	8	3	7	4	n = 304
6	2	7	1	3	5	8	4	n = 368
6	2	7	1	4	8	5	3	n = 32
6	3	1	7	5	8	2	4	n = 216
6	3	1	8	4	2	7	5	n = 32
6	3	1	8	5	2	4	7	n = 24
6	3	5	7	1	4	2	8	n = 64
6	3	5	8	1	4	2	7	n = 40

Kampiran.

6	3	7	2	4	8	1	5	n = 56
6	3	7	2	8	5	1	4	n = 24
6	3	7	4	1	8	2	5	n = 48
6	4	1	5	8	2	7	3	n = 80
6	4	2	8	5	7	1	3	n = 240
6	4	7	1	3	5	2	8	n = 40
6	4	7	1	8	2	5	3	n = 32
6	8	2	4	1	7	5	3	n = 216
7	1	3	8	6	4	2	5	n = 472
7	2	4	1	8	5	3	6	n = 336
7	2	6	3	1	4	8	5	n = 160
7	3	1	6	8	5	2	4	n = 264
7	4	2	5	8	1	3	6	n = 280
7	4	2	8	6	1	3	5	n = 72
7	5	3	1	6	8	2	4	n = 400
8	2	4	1	7	5	3	6	n = 504
8	2	5	3	1	7	4	6	n = 136
8	3	1	6	2	5	7	4	n = 200
8	4	1	3	6	2	7	5	n = 264

**BANYAKNYA PENGECEKAN PADA
PERSOALAN DELAPAN RATU UNTUK SATU KASUS**

x[1]: 1 i = 1 j = 1
 x[2]: 3 i = 2 j = 3
 x[3]: 5 i = 3 j = 5
 x[4]: 2 i = 4 j = 2
 x[5]: 4 i = 5 j = 4
 x[5]: 8 i = 5 j = 8
 x[4]: 7 i = 4 j = 7
 x[5]: 2 i = 5 j = 2
 x[6]: 4 i = 6 j = 4
 x[7]: 6 i = 7 j = 6
 x[5]: 4 i = 5 j = 4
 x[4]: 8 i = 4 j = 8
 x[5]: 2 i = 5 j = 2
 x[6]: 4 i = 6 j = 4
 x[7]: 6 i = 7 j = 6
 x[5]: 4 i = 5 j = 4
 x[3]: 6 i = 3 j = 6
 x[4]: 2 i = 4 j = 2
 x[5]: 7 i = 5 j = 7
 x[6]: 5 i = 6 j = 5

x[4]: 8 i = 4 j = 8
 x[5]: 2 i = 5 j = 2
 x[6]: 4 i = 6 j = 4
 x[6]: 5 i = 6 j = 5
 x[3]: 7 i = 3 j = 7
 x[4]: 2 i = 4 j = 2
 x[5]: 4 i = 5 j = 4
 x[6]: 8 i = 6 j = 8
 x[5]: 8 i = 5 j = 8
 x[6]: 5 i = 6 j = 5
 x[3]: 8 i = 3 j = 8
 x[4]: 2 i = 4 j = 2
 x[5]: 4 i = 5 j = 4
 x[5]: 7 i = 5 j = 7
 x[4]: 6 i = 4 j = 6
 x[5]: 2 i = 5 j = 2
 x[5]: 4 i = 5 j = 4
 x[6]: 2 i = 6 j = 2
 x[7]: 5 i = 7 j = 5
 x[2]: 4 i = 2 j = 4
 x[3]: 2 i = 3 j = 2
 x[4]: 5 i = 4 j = 5
 x[5]: 3 i = 5 j = 3
 x[5]: 8 i = 5 j = 8
 x[4]: 7 i = 4 j = 7

Kampiran.

```
x[5]: 3 i = 5 j = 3
x[4]: 8 i = 4 j = 8
x[5]: 3 i = 5 j = 3
x[6]: 7 i = 6 j = 7
x[5]: 6 i = 5 j = 6
x[6]: 3 i = 6 j = 3
x[3]: 6 i = 3 j = 6
x[4]: 3 i = 4 j = 3
x[4]: 8 i = 4 j = 8
x[5]: 2 i = 5 j = 2
x[6]: 5 i = 6 j = 5
x[7]: 3 i = 7 j = 3
x[6]: 7 i = 6 j = 7
x[7]: 3 i = 7 j = 3
x[5]: 3 i = 5 j = 3
x[6]: 5 i = 6 j = 5
x[6]: 7 i = 6 j = 7
x[3]: 7 i = 3 j = 7
x[4]: 3 i = 4 j = 3
x[5]: 6 i = 5 j = 6
x[6]: 2 i = 6 j = 2
x[7]: 5 i = 7 j = 5
x[5]: 8 i = 5 j = 8
x[6]: 2 i = 6 j = 2
x[7]: 5 i = 7 j = 5

x[4]: 5 i = 4 j = 5
x[5]: 2 i = 5 j = 2
x[5]: 3 i = 5 j = 3
x[5]: 8 i = 5 j = 8
x[6]: 2 i = 6 j = 2
x[3]: 8 i = 3 j = 8
x[4]: 3 i = 4 j = 3
x[4]: 5 i = 4 j = 5
x[5]: 2 i = 5 j = 2
x[5]: 3 i = 5 j = 3
x[2]: 5 i = 2 j = 5
x[3]: 2 i = 3 j = 2
x[4]: 6 i = 4 j = 6
x[5]: 3 i = 5 j = 3
x[6]: 7 i = 6 j = 7
x[7]: 4 i = 7 j = 4
x[4]: 8 i = 4 j = 8
x[5]: 3 i = 5 j = 3
x[6]: 7 i = 6 j = 7
x[7]: 4 i = 7 j = 4
x[5]: 6 i = 5 j = 6
x[6]: 3 i = 6 j = 3
x[6]: 4 i = 6 j = 4
x[3]: 7 i = 3 j = 7
x[4]: 2 i = 4 j = 2
```

Lampiran

```

x[4]: 5 i = 4 j = 5
x[5]: 2 i = 5 j = 2
x[5]: 3 i = 5 j = 3
x[5]: 8 i = 5 j = 8
x[6]: 2 i = 6 j = 2
x[3]: 8 i = 3 j = 8
x[4]: 3 i = 4 j = 3
x[4]: 5 i = 4 j = 5
x[5]: 2 i = 5 j = 2
x[5]: 3 i = 5 j = 3
x[2]: 5 i = 2 j = 5
x[3]: 2 i = 3 j = 2
x[4]: 6 i = 4 j = 6
x[5]: 3 i = 5 j = 3
x[6]: 7 i = 6 j = 7
x[7]: 4 i = 7 j = 4
x[4]: 8 i = 4 j = 8
x[5]: 3 i = 5 j = 3
x[6]: 7 i = 6 j = 7
x[7]: 4 i = 7 j = 4
x[5]: 6 i = 5 j = 6
x[6]: 3 i = 6 j = 3
x[6]: 4 i = 6 j = 4
x[3]: 7 i = 3 j = 7
x[4]: 2 i = 4 j = 2

```

```

x[5]: 4 i = 5 j = 4
x[6]: 8 i = 6 j = 8
x[5]: 6 i = 5 j = 6
x[6]: 3 i = 6 j = 3
x[6]: 8 i = 6 j = 8
x[3]: 8 i = 3 j = 8
x[4]: 2 i = 4 j = 2
x[5]: 4 i = 5 j = 4
x[6]: 7 i = 6 j = 7
x[7]: 3 i = 7 j = 3
x[5]: 7 i = 5 j = 7
x[6]: 3 i = 6 j = 3
x[7]: 6 i = 7 j = 6
x[4]: 6 i = 4 j = 6
x[5]: 3 i = 5 j = 3
x[6]: 7 i = 6 j = 7
x[7]: 2 i = 7 j = 2
x[8]: 4 i = 8 j = 4

```

1 5 8 6 3 7 2 4
n = 876