**2. [27]**

|  |
| --- |
| **Kode Program :** |
| uses crt;  function Proses (x : integer): integer;  begin  if(x <= 1) then Proses := x  else Proses := Proses(x div 2 \* x mod 2) + Proses(x div 2 + x mod 2);  end;  var x :integer;  begin  read(x);  x := proses(x);  write(x);  readkey;  end. |
| **Output Dari Program :** |
|  |

**3. [28]**

|  |
| --- |
| **Kode Program :** |
| uses crt;  function noan(n : integer) : integer;  begin  if(n < 4) then noan := n  else noan := noan(n-1) + noan(n-2) + noan(n-4);  end;  var n :integer;  begin  read (n);  n :=noan (n);  write (n);  readkey;  end. |
| **Output dari Program :** |
|  |

**5. [30]**

|  |
| --- |
| **Kode Program :** |
| Uses crt;  var x,y: integer;  begin  x := 1;  y := 0;  while(x <= 10) do begin  y := y + x;  x := x + x;  end;  writeln(y);  readln;  end. |
| **Output dari Program :** |
| y = 1 + 2 + 4 + 8 = 15 |

**6. [31]**

|  |
| --- |
| **Kode Program :** |
| uses crt;  var  ar : array[1..10] of integer;  a, b, c, i : integer;  begin  ar[1]:=4;  ar[2]:=5;  ar[3]:=10;  ar[4]:=5;  ar[5]:=51;  ar[6]:=33;  ar[7]:=49;  ar[8]:=64;  ar[9]:=2;  ar[10]:=7;  a := -1;  for i := 1 to 10 do begin  if a = -1 then a := i  else if ar[i] > ar[a] then a := i;  end;  b := -1;  for i := 1 to 10 do begin  if i <> a then begin  if b = -1 then b := i  else if ar[i] > ar[b] then b := i;  end;  end;  c := -1;  for i := 1 to 10 do begin  if (i <> a) and (i <> b) then begin  if c = -1 then c := i  else if ar[i] > ar[c] then c := i;  end;  end;  writeln(a, ' ', b, ' ', c);  readln;  end. |
| **Output dari Program :** |
| **8 5 7** |

**7. [32]**

|  |
| --- |
| **Kode Program :** |
| uses crt;  function meong(x: longint):integer;  begin  if (x = 0) then  meong := 0  else if (x mod 2 = 1) and ((x div 2) mod 2 = 1) then  meong := meong((x div 2) div 2) + 1  else  meong := meong(x + 1) + 1;  end;  begin  writeln(meong(888));  readln;  end. |
| **Output dari Program :** |
| **(4-3) + (4-1) + (4-3) + (4-2) + (4-0) = 11** |

**8. (33)**

|  |
| --- |
| **Kode Program :** |
| uses crt;  var  arr: array [1..20] of integer;  function get : integer;  var  m: integer;  left, right: integer;  begin  arr[1]:=303;  arr[2]:=304;  arr[3]:=365;  arr[4]:=454;  arr[5]:=487;  arr[6]:=6;  arr[7]:=12;  arr[8]:=15;  arr[9]:=78;  arr[10]:=90;  arr[11]:=155;  arr[12]:=169;  arr[13]:=183;  arr[14]:=205;  arr[15]:=209;  arr[16]:=218;  arr[17]:=5;  arr[18]:=269;  arr[19]:=282;  arr[20]:=287;  if (arr[1] < arr[20]) then  get := 1  else begin  left := 1;  right := 20;  while (left < right) do  begin  m := (left+right) div 2;  if (arr[1] <= arr[m]) then  left := m+1  else  right := m;  end;  get := left;  end;  end;  begin  write(get);  readln;  end. |
| **Output Dari Program :** |
| **6** |

**12. [37&38]**

|  |
| --- |
| **Kode Program :** |
| Uses crt;  var  daebak : array [0..2015] of char;  w, x, y, z, i : integer;  procedure saranghae(x : integer; len : integer);  var  i : integer;  store : char;  begin  store := daebak[x];  for i := len-1 downto 0 do begin  if (i = 0) then  daebak[x+((i+1) mod len)] := store  else  daebak[x+((i+1) mod len)] := daebak[x+i];  end;  end;  procedure anyeong(arr\_sz : integer; part\_sz : integer);  var  i : integer;  begin  for i:= 0 to (arr\_sz div part\_sz)-1 do  begin  saranghae(i \* part\_sz, part\_sz);  end;  end;  procedure oppa(n : integer);  var  i : integer;  begin  for i := 0 to n-1 do begin  if(i mod 4 = 0) then daebak[i] := 'T'  else if(i mod 4 = 1) then daebak[i] := 'O'  else if(i mod 4 = 2) then daebak[i] := 'K'  else daebak[i] := 'I';  end;  end;  begin  readln(w, x, y, z);  oppa(w);  for i := 1 to x do  anyeong(y, z);  for i := 0 to w-1 do  begin  if(i mod 4 = 0) and (i <> 0) then write(' ');  write(daebak[i]);  end;  writeln;  readln;  end. |
| **Output Dari Program :** |
| **37.**  **16 2 12 4**  **KITO KITO KITO TOKI**  **38.**  **16 4 10 5**  **OKIT TKIT OOKI TOKI** |

**14. [43&44]**

|  |
| --- |
| **Kode Program** |
| uses crt;  var  isi : array[1..10] of integer;  i : integer;  procedure Whatsup(l, r : integer);  var  X : integer;  begin  X := isi[l];  isi[l] := isi[r];  isi[r] := X;  end;  procedure naoooon(l, r : integer);  var  ini : integer;  kiri, kanan : integer;  begin  if(l < r) then begin  kiri := l;  kanan := r;  ini := isi[(kiri + kanan) div 2];  while(kiri < kanan) do begin  while(isi[kiri] > ini) do kiri := kiri + 1;  while(isi[kanan] < ini) do kanan := kanan - 1;  if(kiri < kanan) then Whatsup(kiri, kanan);  end;  naoooon(l, kanan);  naoooon(kanan+1, r);  end;  end;  begin  isi[1] := 5; isi[2] := 10; isi[3] := 18; isi[4] := 1; isi[5] := 7;  isi[6] := 9; isi[7] := 3; isi[8] := 8; isi[9] := 100; isi[10] := 29;  naoooon(1,10);  for i := 1 to 9 do  write(isi[i], ' ');  writeln(isi[10]);  readln;  end. |
| **Output Dari Program :** |
| **43.** 100 29 18 10 9 8 7 5 3 1  **44.** Mengurutan dari index 3 sampai 6, outputnya : 5 10 18 9 7 1 3 8 100 29 |

**15. [45]**

|  |
| --- |
| **Kode Program :** |
| uses crt;  Var  ar : array[1..5] of integer;  i : integer;  procedure S(a,b : integer);  var  temp : integer;  begin  temp := ar[a];  ar[a] := ar[b];  ar[b] := temp;  end;  begin  for i := 1 to 5 do read(ar[i]);  S(3,4);  S(4,1);  S(5,2);  S(5,1);  for i := 1 to 4 do begin  write(ar[i], ' ');  end;  writeln(ar[5]);  readkey;  end. |
| **Output Dari Program :** |
|  |

**17. [47] II**

|  |
| --- |
| **Kode Program :** |
| uses crt;  var  n, m : longint;  jumlah : int64;  begin  readln(n, m);  while (n > 0) or (m > 0) do  begin  jumlah := jumlah + n\*m;  dec(n); dec(m);  end;  writeln(jumlah);  readln;  end. |
| **Output Dari Program :** |
| 3 4 20  4 3 20  1 10 10  5 5 55 |

**18. [48] II**

|  |
| --- |
| **Kode Program :** |
| Uses crt;  var  n,i:integer;  s,k:string;  begin  k:='';  readln(s);  n:=length(s);  for i:=n downto 1 do  begin  k:=k+ s[i];  end;  if s=k then writeln('PALINDROM')  else writeln('BUKAN PALINDROM');  readln;  end. |
| **Output Dari Program :** |
| 4 abba PALINDROM  4 abbb BUKAN PALINDROM  1  a PALINDROM  9 kasurrusak PALINDROM  19 ospduaribuenambelas BUKAN PALINDROM |