|  |  |
| --- | --- |
| Nama | Sabda Alam |
| NIM | C1A160015 |
| OSP | 2013 |

1. No.26

|  |
| --- |
| Kode Program Dalam Soal : *(Soal Dirapikan)* |
| var N,hasil: integer;  procedure solve(X:integer);  begin  if (X>1) then  begin  hasil:=hasil+1;  solve(X div 2 + X mod 2);  end;  end;  begin  readln(N);  hasil:=0;  solve(N);  writeln(hasil);  end. |
| Kode Program Dimodifikasi : *(Hasil Modifikasi Diwarnai)* |
| uses crt;  var  N,hasil : integer;  procedure solve(x:integer);  var  divx, modx, jumlah : integer;  begin  if (X>1) then  begin  divx:=x div 2;  modx:=x mod 2;  jumlah:=divx + modx;  hasil:=hasil+1;  solve(divx + modx);  writeln('solve(',divx,'+',modx,') = ',jumlah,' ');  end;  end;  begin  write('Masukan bilangan N : '); readln(N);  hasil:=0;  solve(N);  writeln('Hasil perulanga : ',hasil);  readkey;  end. |
| Output Dari Kode Program Yang Dimodifikasi : |
| Masukan bilangan N : 77  solve(1+0) = 1  solve(1+1) = 2  solve(2+1) = 3  solve(5+0) = 5  solve(10+0) = 10  solve(19+1) = 20  solve(38+1) = 39  Hasil perulanga : 7 |

1. No.27

|  |
| --- |
| Kode Program Dalam Soal : *(Soal Dirapikan)* |
| base := ‘QWERTYUIOPLKJHGFDSAZXCVBNM’;  kata := ‘’;  readln(kalimat);  for i:= length(kalimat) downto 1 do  begin  if pos(kalimat[i], base) > 0 then  kata:= kata & kalimat[i];  end;  writeln(kata); |
| Kode Program Dimodifikasi : *(Hasil Modifikasi Diwarnai)* |
| uses crt;  var  kata,kalimat,base : string;  i : integer;  begin  base := 'QWERTYUIOPLKJHGFDSAZXCVBNM';  kata := '';  kalimat := 's4yA-BuK4N+oRanG aLaY!?' ;  for i:= length(kalimat) downto 1 do  begin  if pos(kalimat[i], base) > 0 then  kata:= kata + kalimat[i];  writeln(kata);  end;  readkey;  end. |
| Output Dari Kode Program Yang Dimodifikasi : |
| Y  Y  YL  YL  YL  YLG  YLG  YLG  YLGR  YLGR  YLGR  YLGRN  YLGRN  YLGRNK  YLGRNK  YLGRNKB  YLGRNKB  YLGRNKBA  YLGRNKBA  YLGRNKBA  YLGRNKBA |

1. No.32

|  |
| --- |
| Kode Program Dalam Soal : *(Soal Dirapikan)* |
| procedure tulis(n,m:integer);  var  i,j,k:integer;  begin  for i:=1 to n do  begin  for j:=1 to (n div m) do  for k:=1 to m do  writeln('\*');  for j:=1 to (n mod m) do  writeln('-');  end;  end; |
| Kode Program Dimodifikasi : *(Hasil Modifikasi Diwarnai)* |
| uses crt;  var  a,b,c:integer;  procedure tulis(n,m:integer);  var  i,j,k:integer;  begin  for i:=1 to n do  begin  for j:=1 to (n div m) do  for k:=1 to m do  begin  c:=c+1;  writeln(‘\* ke: ‘,c);  end;  for j:=1 to (n mod m) do  writeln('-');  end;  end;  begin  a:=30;  b:=30;  tulis(a,b);  readkey;  end. |
| Output Dari Kode Program Yang Dimodifikasi : |
| 880 \*  881 \*  882 \*  883 \*  884 \*  885 \*  886 \*  887 \*  888 \*  889 \*  890 \*  891 \*  892 \*  893 \*  894 \*  895 \*  896 \*  897 \*  898 \*  899 \*  900 \*  (output tidak semua) |

1. No.36

|  |
| --- |
| Kode Program Dalam Soal : *(Soal Dirapikan)* |
| function hap(x,t: integer): integer;  begin  if t = 1 then  hap := x mod 5  else  hap := 5\*x;  end;  function hip(x,y: integer): integer;  begin  if x < y then  hip := hip(y,x)  else  hip := hap(x,1) + hap(y,2);  end;  function hop(x,y,z: integer): integer;  begin  if y > z then  hop := hop(x,z,y)  else if x > y then  hop := hop(y,x,z)  else  hop := hip(x,y) + z;  end; |
| Kode Program Dimodifikasi : *(Hasil Modifikasi Diwarnai)* |
| uses crt;  var  a : integer;  function hap(x,t: integer): integer;  begin  if t = 1 then  begin  hap := x mod 5;  writeln('hap(18,1):= ',x,' mod ',5,' =',hap,'');  end  else  begin  hap := 5\*x;  writeln('hap(3,2):= ',5,'\*',x,' = ',hap,'');  end;  end;  function hip(x,y: integer): integer;  begin  if x < y then  begin  hip := hip(y,x);  writeln('hip(',y,',',x,')');  end  else  begin  hip := hap(x,1) + hap(y,2);  writeln('hip:=hap(',x,',',1,') + (',y,',',2,')');  end;  end;    function hop(x,y,z: integer): integer;  begin  if y > z then  hop := hop(x,z,y)  else if x > y then  begin  hop := hop(y,x,z);  writeln('hop(',y,',',x,',',z,')');  end  else  begin  hop := hip(x,y) + z;  writeln('hop:=hip(',x,',',y,') + ',z,'');  end;  end;  begin  a:=hop(18,3,1993);  write('jumlah : ',a);  readkey;  end. |
| Output Dari Kode Program Yang Dimodifikasi : |
| hap(18,1):= 18 mod 5 =3  hap(3,2):= 5\*3 = 15  hip:=hap(18,1) + hap(3,2)  hip:=hip(18,3)  hop:=hip(3,18) + 1993  hop:=hop(3,18,1993)  hasil : 2011 |

1. No.43

|  |
| --- |
| Kode Program Dalam Soal : *(Soal Dirapikan)* |
| var i,j,x: integer;  begin  x := 0;  for i:=1 to 5 do  begin  for j:= 5 downto 1 do  begin  x := x + i + j;  end;  end;  writeln(x);  end. |
| Kode Program Dimodifikasi : *(Hasil Modifikasi Diwarnai)* |
| uses crt;  var i,j,x: integer;  begin  x := 0;  for i:=1 to 5 do  begin  for j:= 5 downto 1 do  begin  writeln('x = ',x,' + i = ',i,' + j = ',j);  x := x + i + j;  writeln('x:= ',x);  end;  end;  writeln(x);  readln;  end. |
| Output Dari Kode Program Yang Dimodifikasi : |
| x = 0 + i = 1 + j = 5  x:= 6  x = 6 + i = 1 + j = 4  x:= 11  x = 11 + i = 1 + j = 3  x:= 15  x = 15 + i = 1 + j = 2  x:= 18  x = 18 + i = 1 + j = 1  x:= 20  x = 20 + i = 2 + j = 5  x:= 27  x = 27 + i = 2 + j = 4  x:= 33  x = 33 + i = 2 + j = 3  x:= 38  x = 38 + i = 2 + j = 2  x:= 42  x = 42 + i = 2 + j = 1  x:= 45  x = 45 + i = 3 + j = 5  x:= 53  x = 53 + i = 3 + j = 4  x:= 60  x = 60 + i = 3 + j = 3  x:= 66  x = 66 + i = 3 + j = 2  x:= 71  x = 71 + i = 3 + j = 1  x:= 75  x = 75 + i = 4 + j = 5  x:= 84  x = 84 + i = 4 + j = 4  x:= 92  x = 92 + i = 4 + j = 3  x:= 99  x = 99 + i = 4 + j = 2  x:= 105  x = 105 + i = 4 + j = 1  x:= 110  x = 110 + i = 5 + j = 5  x:= 120  x = 120 + i = 5 + j = 4  x:= 129  x = 129 + i = 5 + j = 3  x:= 137  x = 137 + i = 5 + j = 2  x:= 144  x = 144 + i = 5 + j = 1  x:= 150  150 |

1. No.47

|  |
| --- |
| Kode Program Dalam Soal : *(Soal Dirapikan)* |
| procedure f(x: longint; y: longint; z: longint);  begin  if (y = 0) then  writeln(z)  else  begin  if (y mod 2 = 1) then  z := z + x;  f(2\*x, y div 2, z)  end;  end; |
| Kode Program Dimodifikasi : *(Hasil Modifikasi Diwarnai)* |
| uses crt;  procedure f(x: longint; y: longint; z: longint);  begin  if (y = 0) then  begin  writeln('z = ',z)  end  else  begin  if (y mod 2 = 1) then  z := z + x;  f(2\*x, y div 2, z);  writeln('f(2\*x:',x,' y:',y,' div 2 z:)',z);  end;  end;  begin  f(15,97,0);  readkey;  end. |
| Output Dari Kode Program Yang Dimodifikasi : |
| z = 1455  f(2\*x:960 y:1 div 2 z:)1455  f(2\*x:480 y:3 div 2 z:)495  f(2\*x:240 y:6 div 2 z:)15  f(2\*x:120 y:12 div 2 z:)15  f(2\*x:60 y:24 div 2 z:)15  f(2\*x:30 y:48 div 2 z:)15  f(2\*x:15 y:97 div 2 z:)15 |