

עזאלדין אלקרעאן : 207101429

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	<u>קלט</u>	<u>פלט</u>
1)	<pre>func foo(x:real) return int { var a:int; a=23; if (a==23) a=10; else a=19; return 1+a; } proc Main() { var a,b : int; a=0; while (a<10){ b=foo(3.14); a=a+b; } }</pre>	<pre>foo: BeginFunc a = 23 t0 = a == 23 if not t0 Goto L1 a = 10 Goto L2 L1: a = 19 L2: t1 = 1 + a Return t1 EndFunc Main: BeginFunc a = 0 L3: t0 = a < 10 if not t0 Goto L4 PushParam 3.14 t1 = LCall foo PopParams 8 b = t1 t2 = a + b a = t2 Goto L3 L4: EndFunc</pre>
2)	<pre>proc Main() { var a,b : int; if (a<10 (a>b && b<0)) { b=10; a=a+b; } }</pre>	<pre>Main: BeginFunc t0 = a < 10 t1 = t0 if not t1 Goto L1 Goto L3 L1: t2 = b < a t3 = t2 if not t3 Goto L2 t4 = b < 0 t3 = t4 L2: t1 = t3 L3: if not t1 Goto L4 b = 10 t5 = a + b a = t5 L4: EndFunc</pre>

	<u>טל</u>	<u>פלט</u>
3)	<pre> proc foo(a:int) { a=20; } proc Main() { var a,b : int; while (a<10 b<10) { if(a>10) { b=20; } else { foo(12); } } } </pre>	<pre> foo: BeginFunc a = 20 EndFunc Main: BeginFunc L1: t0 = a < 10 t1 = t0 if not t1 Goto L2 Goto L3 L2: t2 = b < 10 t1 = t2 L3: if not t1 Goto L6 t3 = 10 < a if not t3 Goto L4 b = 20 Goto L5 L4: PushParam 12 LCall foo PopParams 4 L5: Goto L1 L6: EndFunc </pre>
4)	<pre> proc foo(a:int) { a=20; } proc Main() { var a,b : int; while (a<10) { while(b<10) { b=20; foo(12); } } } } </pre>	<pre> foo: BeginFunc a = 20 EndFunc Main: BeginFunc L1: t0 = a < 10 if not t0 Goto L4 L2: t1 = b < 10 if not t1 Goto L3 b = 20 PushParam 12 LCall foo PopParams 4 Goto L2 L3: Goto L1 L4: EndFunc </pre>

	<u>טק</u>	<u>פלט</u>
5)	<pre> proc Main() { var a:string[10]; var x,y,z:real; y=x*4+z/2+4*y-5; a[2]='a'; } </pre>	<pre> Main: BeginFunc t0 = x * 4 t1 = z / 2 t2 = t0 + t1 t3 = 4 * y t4 = t2 + t3 t5 = t4 - 5 y = t5 t6 = a + 2 t7 = *t6 t6 = a EndFunc </pre>
6)	<pre> func foo(x,y,z:real) return real { return x*y+z*y; } proc Main() { var x,y,z:real; if(x>y z>y) { x=1.2; y=x+1.8; } else { z=foo(x,y,z); } } </pre>	<pre> foo: BeginFunc t0 = x * y t1 = z * y t2 = t0 + t1 Return t2 EndFunc Main: BeginFunc t0 = y < x t1 = t0 if not t1 Goto L1 Goto L2 L1: t2 = y < z t1 = t2 L2: if not t1 Goto L3 x = 1.2 t3 = x + 1.8 y = t3 Goto L4 L3: PushParam z PushParam y PushParam x t4 = LCall foo PopParams 24 z = t4 L4: EndFunc </pre>

	<u>טל</u>	<u>פל</u>
7)	<pre> func fee2(x:real) return real { return x*1.4; } func fee1() return char { var c:char; c='a'; return c; } proc Main() { var x,y,z:real; var c:char; if(x>3.14) { x=1.2; c=fee1(); } else { x=fee2(x); } } </pre>	<pre> fee2: BeginFunc t0 = x * 1.4 Return t0 EndFunc fee1: BeginFunc c = a Return c EndFunc Main: BeginFunc t0 = 3.14 < x if not t0 Goto L1 x = 1.2 t1 = LCall fee1 c = t1 Goto L2 L1: PushParam x t2 = LCall fee2 PopParams 8 x = t2 L2: EndFunc </pre>