The generating function for Chebyshev polynomials is introduced.
The successive derivatives are taken and evaluated at \( t=0 \).
The results are printed as the successive Chebyshev polynomials.

```maple
#restart;
GenCheb:=(1-t*x)/(1-2*x*t+t^2);

nn:=10;

gg:=GenCheb:Cheb[0]:=subs(t=0,gg):print(0,Cheb[0]);
for i from 1 to nn do gg:=diff(gg,t)/i:Cheb[i]:=subs(t=0,gg):print(i,Cheb[i]):od:
```

0, 1
1, \( x \)
2, \( 2x^2 - 1 \)
3, \( 4x^3 - 3x \)
4, \( 8x^4 - 8x^2 + 1 \)
5, \( 16x^5 - 20x^3 + 5x \)
6, \( 32x^6 - 48x^4 + 18x^2 - 1 \)
7, \( 64x^7 - 112x^5 + 56x^3 - 7x \)
8, \( 128x^8 - 256x^6 + 160x^4 - 32x^2 + 1 \)
9, \( 256x^9 - 576x^7 + 432x^5 - 120x^3 + 9x \)
10, \( 512x^{10} - 1280x^8 + 1120x^6 - 400x^4 + 50x^2 - 1 \)