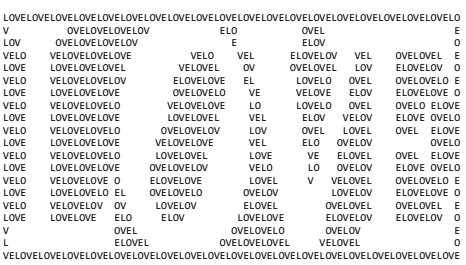
Depicter

Here's a cute little program that draws a simple Black and White picture on the screen with the word of your choice. By changing a few lines at the beginning you can change what is shown. As it's written it displays the "LOVE" shown to the right, but there are many other picture codes available in the Author's Notes after the program.



Depicter is written by Joseph Larson of Colorado, USA. Some pictures depicted are from 'BASIC Computer Games' edited by David H. Ahl (c) 1978

DEPICTER.CPP | You will need: a C/C++ complier .

```
#include <iostream>
#include <string>
#include <sstream>
#include <fstream>
#include <cstdio>
using namespace std;
#define BW (pict.depict_next ()) ? bunny.at(c % bunny.length()) : ' '

// 80x24 LOVE Picture Code
string code =
"~~~y,w*7.?\"?`u&10?\"Oht,?LPph`olQu-p`0qh`olQu.rH0ohQqn`s-r`0ohQqn`s.s`0ohQ_q"
"`s.rP3lh3Or`s/sP3lh3?r`s0s07hh7/r`s0r/?`h7Nn?lqPr/?`h7nn?lo2n?0O@l7n_?lo6n?PO"
".p`pn`p<h?0o.q`olQphP70q/q`o<&?(r/o&3(o*uPo&~~~y";
int width = 78;
// End picture code

class Picture {
  private:
  int place, ch;
  char current;
  public:
  Picture ();
  int eop ();
  int depict_next ();
};
Picture::Picture () {place = ch = 0; current = code.at(0) - 33;}

int Picture::depict_next () {
  if (place == 6) {
    if (++ch >= code.length()) return 2;
    current = code.at(ch) - 33; place = 0;
  }
  if (current < 15) {current++; return 0;}
  if (current > 78) {current--; return 1;}
  return ((current - 15) & (1 << place++));
}
int Picture::eop () {if (ch >= code.length()) return 1; else return 0;}

int main () {
  ofstream output;
  int c;
  char cur;
  string line, in, bunny;
  output.open("Depicter.txt");
  Picture pict;
```

Listing continued on page 2...

DEPICTER.CPP	Listing Continued from page 1….

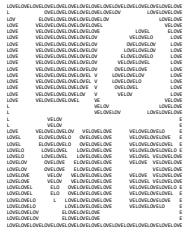
```
  cout << "\nInput a word to use to draw the picture or press ENTER : ";
  getline (cin, bunny);
  if (!bunny.compare ("")) bunny = "XX";
  cout << "\n"; c = 0;
  cur = BW; c++;
  while (!pict.eop ()) {
    cout << cur; output << cur;
    if ((c % width) == 0) {cout << '\n'; output << '\n';}
    cur = BW; c++;
  }
  output.close ();
  cout << "\nPress ENTER to continue...";
  getline (cin, line);
}
```

Author's Notes:

This was sort of an exercise in image compression. My goal was to make a method that would utilize every typeable character on the keyboard. Fortunately every typeable character is contained in one place on the ASCII table, from #33 (!) to #126 (~). Now hold on tight, we're going to get technical here. Binary gives a good assortment of two characters in various orders, but 93 typeable characters is too much to represent all 7 bit binary combination, but too much for 6 bit combination. However, since runs of spaces or solids are likely to be common, we'll throw in some runs and voila, we can use all 93 typeable characters. In table form the compression I came up with looks like this:

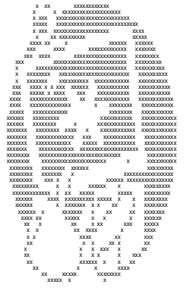
ASCII Value	33 ('!'), 34 ('"'), …, 47('/')	47 ('0'), 48 ('1'), 49 ('2'), …, 111 ('o')	112 ('p'), 113 ('q'), …, 126 ('~')
Usage	Runs of spaces	Binary combinations of 6 spaces or characters	Runs of characters

Okay, enough technical gobblety gook. Let's get with the alternate pictures you can draw. Just replace the lines at the beginning of the program with the lines below to change the picture:



```
// Robert Indiana's LOVE Picture Code
string code =
"~~|*~O.x.~7(u0~3%s0~1/OPq0~+q0q0~,sPp0~-tPp0~.t0q0~/t/q0~0t.q0|2no-q0|2nO-q0{"
"4hO,q0z8P?+q0xP1%p!.O&r!.r-v)O!$3-O!$OPuhp0uPOPshq0wh7hqhq0xl7hohr0yn3lOlq0pn"
"u0phs0olv0phs({0Ols0olw0Ols0pnw07x0ynOPSw0xlp0aw0whq,y0uPt.v!0u.v!0~~|";
int width = 60;
// End picture code
```

```
// Bunny Picture Code
string code =
"6!!h!#ol3!,{!,un?!Pulo!ht`r"x0t%y.t'y,t)x)t+x'u.x%u0w"u`u!npls!hqnq!0~1!`{!+z"
"!'v!$s!!q!#v!({!,~!.~3!n~!h~?"qlx!qhz#rhz$slz%~v&~w%~u#~t"~r!l~7!h}2!Pg?O4!0O"
"l?8!P?i?@!`?l7o!hx>!PSBq!.3652!$c3!!L!!03%";
int width = 51;
// End picture code
```



```
// Cymon Picture Code
string code =
"tVp*~vn=$~rR3!~oP3!h~R1(q`~N2PxP|@nnr07hwh7n7,7`vHhO%7Pshp!`1`qn1!P30r>07!7/q"
">P7/3.7/ph@53L,7.ohP2?N,7.Oh)?7-7-?L)qN/7.?h*w.7.7h-w+7-3L/on3-3.3h.3g3.3.3h)"
"7?-7.3h*?H,7.3h1/3&3/3`1!lO-3`3$pn1P3`1HP|-?07`mv%?0?jnp01+O.o^OPgo-o)K>hO`3P"
"o0OH-1kM/q0q6`jik.r0k7`mlc1lp@n7l^pNPuLslUoh1xfs<l_o`wju`ol?nulvfWnWynv^amWzl"
"v^nmh{lu0kMn}lrnn3~rl1p.~wPmpn}";
int width = 60;
// End picture code
```