Using Pascal

The 2.11BSD image on the PiDP-11 includes a historical Berkley Pascal compiler, which allows to compile small Pascal programs for educational purposes. This compiler cannot handle very large programs, such as the better known Pascal compilers written around 1980 in Pascal, for example P2, P4, UCSD Pascal or Concurrent Pascal, but it is well suited to play with this interesting historical language. As all historical Pascal compilers for small computers of that time it does not compile into machine language, but into a hypothetical p-code engine, which has to be interpreted with a p-code interpreter.

Interestingly enough, this compiler is itself written in C. As almost all software at that time, the source was distributed and compiled on the target system using make. Fortunately, the source can therefore be inspected in /usr/src/ucb/pascal.

You can find some suitable documentation at https://docs.freebsd.org/44doc/papers/px.html, or as always by using the man command.

We are going to write and compile a short program in this tutorial.

Login as a user, not root, and make a directory for this project.

```
cd
mkdir pascal
cd pascal
vi hello.p
```

Using vi, enter the following little program (or any other little program at your liking):

```
program hello(output);
begin
  message('Congratulation! You are using Pascal on your PiDP-11');
end.
```

Now, compile the program using

```
pi hello.p
```

If it has been compiled successfully, run it with

```
px
```

You can also combine the two stages with the command

```
pix hello.p
```

For details, see

```
man pi
man px
man pix
```