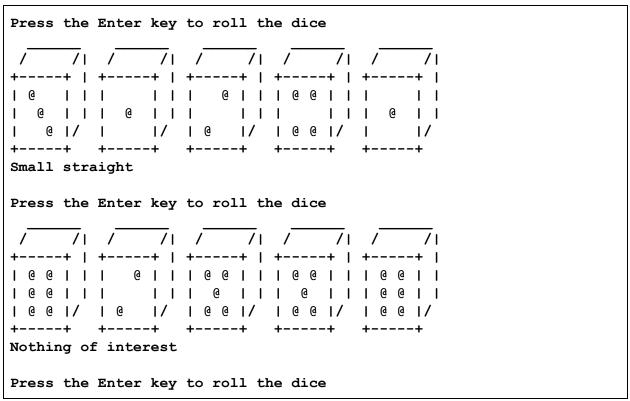# Prog 5: Yachtzee-3D

Develop a MiniAT assembly program that uses the "dead beef" pseudo random number generator from the link below to generate five random dice, drawn in ASCII-3D, and identify the name of the hand.

http://inglorion.net/software/deadbeef_rand/

Your program should produce an interaction formatted EXACTLY as exemplified below for full credit.

```
Press the Enter key to roll the dice

  _____   _____   _____   _____   _____
 /     /|  /     /|  /     /|  /     /|  /     /|
+-----+ | +-----+ | +-----+ | +-----+ | +-----+ |
| @   | | |     | | |  @  | | | @ @ | | |     | |
|  @  | | | @   | | |     | | |     | | |  @  | |
|   @ |/  |     |/ | @   |/ | @ @ |/  |     |/
+-----+   +-----+   +-----+   +-----+   +-----+
Small straight

Press the Enter key to roll the dice

  _____   _____   _____   _____   _____
 /     /|  /     /|  /     /|  /     /|  /     /|
+-----+ | +-----+ | +-----+ | +-----+ | +-----+ |
| @ @ | | |  @  | | | @ @ | | | @ @ | | | @ @ | |
| @ @ | | |     | | |  @  | | |  @  | | | @ @ | |
| @ @ |/  | @   |/ | @ @ |/  | @ @ |/  | @ @ |/
+-----+   +-----+   +-----+   +-----+   +-----+
Nothing of interest

Press the Enter key to roll the dice
```

The program will continue this way forever; Ctrl-c will be required to terminate the application.

Following are all the hand strings your program may print in order of precedence:

Hand String	Requirement
YACHTZEE!!!	one number shows up 5 times
Large straight	a sequence of 5 numbers is rolled: 1--5 or 2--6
Small straight	a sequence of 4 numbers is rolled: 1--4, 2--5 or 3--6

Full House	3 dice with the same value and 2 dice with another. Example: 2 4 2 2 4
Four of a kind	4 dice with the same value
Three of a kind	3 dice with the same value
Nothing of interest	2 or fewer dice with the same value

Helpful logic hints

I recommend first counting the number of times each number, 1--6, appears… say `counts[1]` through `counts[6]`. Then find the largest `counts` value. If the largest `counts` value is 5, YACHTZEE!!!. If the largest `counts` value is 4, four of a kind. If the largest `counts` value is 3, check if any `counts` value is 2… if so, full house… if not, three of a kind. If largest `counts` value is 1 and the number 1 or 6 has a `counts` value of 0, large straight. ... and so on … :-)

Grading

This assignment has many independent elements. The value of each of is listed below to guide you in completing the assignment incrementally.

Feature	Points / 100
infinite loop progressing with prompt that waits for Enter key	10
demonstrating five random numbers are generated	30
dice drawn with '@' pips	10
dice framed with 2D front rectangle	8
dice have primary 3D beveling effect	7
dice have that tricky 3D beveling bit on the bottom right	5
correct hand strings printed with each new roll	30

Submit only your assembly program