

National University of Singapore
School of Computing
CS1101S: Programming Methodology (JavaScript)
Semester I, 2012/2013

Mission Sidequest 2.1
Runic Carpets

Start date: 17 August 2012

Due: 26 August 2012, 23:59

Readings:

- Textbook Sections 1.1.1 to 1.1.4

Background:

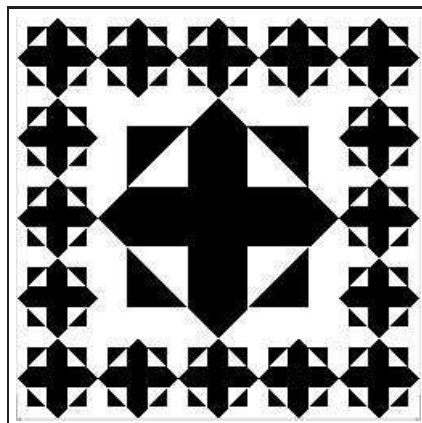
As you wander along the endless hallways of the JFDI temple, you notice several decorative rugs. Upon questioning an instructor, you learn that these ornamental rugs are of Persian origin.

The instructor suggests that it may be possible for you to represent rug designs in form of runes...

This side quest consists of only **one** task.

Task 1:

Observing the nearest Persian rug, you notice that it exhibits 5 repeating patterns on every edge with the centre hollow filled with the same pattern:

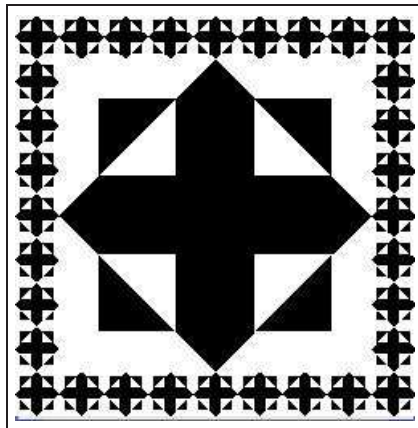


However, there are other Persian rugs that sports different numbers of repeating patterns. Write a function `persian` that takes n as an argument and creates runic representations of these Persian rugs with different numbers of repetitions at the edges, where $n \geq 3$.

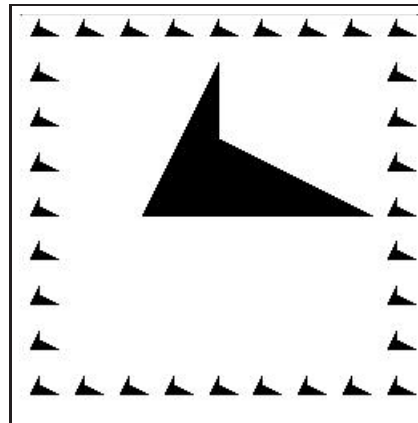
In particular, the above picture can be created with:

```
show(persian(make_cross(rcross_bb), 5));
```

Furthermore, note that the orientation of all images should remain the same as the original. See Figure 1 for more examples.



(a) `show(persian(make_cross(rcross_bb), 9));`



(b) `show(persian(nova_bb, 9));`

Figure 1: More examples. (a) is the same as previous example but with $n = 9$, (b) demonstrates that the original pattern (e.g. `nova_bb`) should not be rotated.

Task Files

- `lib/list.js`
- `lib/misc.js`
- `lib/graphics.js`
- `lib/runes.js`
- `sidequest_2.1.1.html`
- **`sidequest_2.1.1.js`**

Submission

To submit your work to the Academy, copy the contents from the template file(s) into the box that says "Your submission" on the mission page, click "Save Code", then click "Finalize Submission". Note that submission is final and that any mistakes in submission requires extra effort from a tutor or the lecturer himself to fix.