

1. Write a 32-bit RISC-V kernel that prints “hello world.” Run it using QEMU.
2. Implement splitting and coalescing scheme for free space memory management presented in Section 17.2 of the book “Operating Systems: Three Easy Pieces.”
3. Implement the buddy allocation for free space memory management in Section 17.2 of the book “Operating Systems: Three Easy Pieces.”
4. Create an automated test framework to understand performance of the above schemes.