Сборка корневой файловой системы

1. Создадим файл init.c

```
 GNU nano 8.3                                 init.c
#include <stdio.h>
#include <stdlib.h>

int main(void)
{
        printf("\nHello\n");
        sleep(15);
        return 0;
}
```

2. Соберем

```
arm-linux-gnueabihf-gcc -static init.c -o init
```

3. Сформируем архив с файловой системой

```
echo init | cpio -o -H newc | gzip > initramfs.cpio.gz
```

4. Запустим в qemu

```
QEMU_AUDIO_DRV=none qemu-system-arm -M vexpress-a9 -kernel zImage
-dtb vexpress-v2p-ca9.dtb -initrd initramfs.cpio.gz -append
"console=ttyAMA0" -nographic
```

```
[    2.666020] clk: Disabling unused clocks
[    2.666292] PM: genpd: Disabling unused power domains
[    2.702333] Freeing unused kernel image (initmem) memory: 2048K
[    2.706461] Run /init as init process

Hello
[   13.267000] amba 1000f000.wdt: deferred probe pending: (reason unknown)
[   13.267094] amba 100e0000.memory-controller: deferred probe pending: (reason unknown)
[   13.267107] amba 100e1000.memory-controller: deferred probe pending: (reason unknown)
[   13.267117] amba 100e5000.watchdog: deferred probe pending: (reason unknown)
[   17.772220] Kernel panic - not syncing: Attempted to kill init! exitcode=0x00000000
[   17.772933] CPU: 0 UID: 0 PID: 1 Comm: init Not tainted 6.16.7my #1 NONE
[   17.773267] Hardware name: ARM-Versatile Express
```