Rešenja zadataka za treći kolokvijum iz Operativnih sistema 1, avgust 2024.

1.   **(10 poena)**

```
IORequest* pending_req;
size_t pending_cur;
REG* pending_buf = 0;
Event sleep(0);

void transfer (IORequest* req) {
  pending_req = req;

  pending_cur = 0;
  pending_buf = (REG*)(pending_req->buffer);

  mask_intr();
  *r_control = C_START;

  while (pending_cur<pending_req->len;) {
    unsigned long cnt = 0;
    bool ready = false;
    for (; !ready && cnt<MAX_POLL_CNT; cnt++)
      ready = (*r_status) & C_READY;
    if (ready)
      pending_buf[pending_cur++] = *r_data;
    else {
      unmask_intr();
      sleep.wait();
    }
  }

  *r_control = C_STOP;
  pending_req->signal();
}

interrupt void device_ready () {
  pending_buf[pending_cur++] = *r_data;
  mask_intr();
  sleep.signal();
}
```
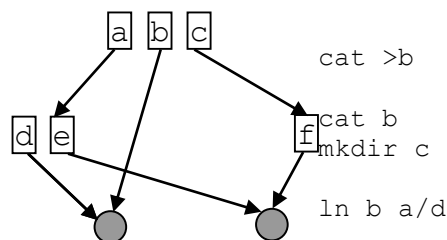
2.   **(10 poena)**

```
mkdir a
ls
      a
ls
      a  b
      xyz
ls
      a  b  c
ls
      a  b  c
cat b>a/e
ls a
```



```
         a  b  c        cat >b

         d  e           cat b
                        mkdir c

                        ln b a/d
```

```
      d  e
ln a/e c/f
cat c/f
      xyz
rm b
cat a/d
      xyz
ls
      a   c
rm  c/f
ls a
      d  e
cat a/e
      xyz
```

3.   (10 poena)
```
void truncateFile (FCB* fcb, size_t newSize) {
  fcb->size = newSize;
  size_t blk = (newSize>0)?((newSize-1)/BlockSize+1):0;
  for (; blk<SingleIndexSize; blk++)
    if (fcb->singleIndex[blk]) {
      freeBlock(fcb->singleIndex[blk]);
      fcb->singleIndex[blk] = 0;
    }

  if (fcb->dblIndex) {
    PBlock* dblIx = (Pblock*)getBlock(fcb->dblIndex);
    bool dblIxEmpty = false;
    for (blk-=SingleIndexSize,dblIxEmpty=(blk==0); blk<DblIndexSize; blk++)
      if (dblIx[blk]) freeBlock(dblIx[blk]);
    if (dblIxEmpty) {
      freeBlock(fcb->dblIndex);
      fcb->dblIndex = 0;
    }
  }
}
```