

1) Part 1:

a. Screenshot of the genesis block

(5 points)

```
cpre331@desktop:~/lab08$ cat genesis.json
{
  "config": {
    "chainId": 331,
    "homesteadBlock": 0,
    "eip150Block": 0,
    "eip155Block": 0,
    "eip158Block": 0
  },
  "alloc"      : {},
  "coinbase"   : "0x00000000000000000000000000000000",
  "difficulty" : "0x2000",
  "extraData"  : "",
  "gasLimit"   : "0x2fefdf",
  "nonce"      : "0x00000000000000000000000000000000",
  "mixhash"    : "0x0000000000000000000000000000000000000000000000000000000000000000",
  "parentHash" : "0x0000000000000000000000000000000000000000000000000000000000000000",
  "timestamp"  : "0x00"
}
```

2) Part 2:

a. Screenshot of bootnode identifier

(5 points)

dccde9 overlap

```
cpre331@desktop:~/lab08$ cat bootnode
enode://e1ed47a5d934e0d21ec4deaddc563d9c445d6ccd5cdae957e122567dccde9
cpre331@desktop:~/lab08$
```

```
dccde9300d1d27044299fe0b7aa347cc1388cf32861b0d8912aab7758d122853f36e618ee@34.18.12.150:30301
```

b. Individual node's identifier with Ubuntu desktop's IP address

(15 points)

```
self=enode://e72aeb2179b2f14df7c7ad76817972526e145ed986571fb5e1ec334a
f3217d111a65b2c7fbc5120e6f984fae34686ddf2cfc7734c50d1f235484727e8d4e5
b24@73.54.41.1:30303
```

c. Screenshot of peer node list
(10 points)

```
> admin.peers
[{"caps": ["eth/66", "snap/1"],
  enode: "enode://eb1fc31bef6fe1baf2e72e814f6dbd131d16b38ba07dfde5e23abbec082207d906168fee61758f03ac19c2bb4d1e591c13b6cc0d733308de40aa5a02a51bc6b2@34.18.12.150:30303",
  id: "d29a22b67bf72156a4b7f3d4c016fdad276c35380e2c42820122b3870ea3c507",
  name: "Geth/v1.10.10-stable-bb74230f/linux-amd64/go1.17.2",
  network: {
    inbound: false,
    localAddress: "73.54.41.1:39768",
    remoteAddress: "34.18.12.150:30303",
    static: true,
    trusted: false
  },
  protocols: {
    eth: {
      difficulty: 19953117069,
      head: "0x78735c867bb05c6719352cf8a85933742b9ee68a2bce17c7424b94bd2a13a1d0",
      version: 66
    },
    snap: {
      version: 1
    }
  }
}]
```

3) Part 3:

a. Screenshot of balance
(5 points)

Passwords: 12345678

Jacob

```
> eth.getBalance(eth.accounts[0])
3000000000000000000000
```

b. Screenshot of balance two minutes later
(5 points)

```
> eth.getBalance(eth.accounts[0])
9200000000000000000000
```

4) Part 4:

a. Screenshot of transaction

(10 points)

```
> eth.getTransaction("0x5dbf5a34906695ce560186da0462d4d52bf60a81c19d300e42f866c7ff5d9cb1")
{
  blockHash: "0xabb04d450f76b0dbbf75d04083c2843dba2bf5723f9415ab076a836297e9e6cf",
  blockNumber: 251,
  from: "0xae5c722e31ecf887206b5eed4cfa85fa6aba7d7b",
  gas: 21000,
  gasPrice: 1000000000,
  hash: "0x5dbf5a34906695ce560186da0462d4d52bf60a81c19d300e42f866c7ff5d9cb1",
  input: "0x",
  nonce: 0,
  r: "0xaf3415fa52b581d8719e2b59aeb240b16ada0318129085d4d225a667de73fa7f",
  s: "0x2ebca8cb705ad56495fb4dd7b4b62b921c612dfb1280dd27b45ab763e77818f6",
  to: "0x4aa2ed3e7909f9d56e051e3582050951f5d363bd",
  transactionIndex: 0,
  type: "0x0",
  v: "0x2ba",
  value: 1000000
}
```

b. Screenshot of transaction block

(5 points)

[illegible]

c. Screenshot of "final" balance after transactions

(10 points)

```
> eth.getBalance(eth.accounts[0])
1.8849999999999999e+21
> eth.getBalance(eth.accounts[1])
10000000
```

d. How many US dollars would this translate to?

(10 points)

1000000 -> \$3777470000.00

5) Part 5:

- a. Screenshot of latest block number
(10 points)

```
> eth.blockNumber  
448
```

- b. Screenshot of minedBlocks output
(10 points)

448 - 1 all of them

```
[ 448, 447, 446, 445, 444, 443, 442, 441, 440, 439, 438, 437, 436, 435, 434, 433, 432, 431, 430, 429, 428, 427, 426, 425, 424, 423, 422, 421, 420, 419, 418, 417, 416, 415, 414, 413, 412, 411, 410, 409, 408, 407, 406, 405, 404, 403, 402, 401, 400, 399, 398, 397, 396, 395, 394, 393, 392, 391, 390, 389, 388, 387, 386, 385, 384, 383, 382, 381, 380, 379, 378, 377, 376, 375, 374, 373, 372, 371, 370, 369, 368, 367, 366, 365, 364, 363, 362, 361, 360, 359, 358, 357, 356, 355, 354, 353, 352, 351, 350, 349, 348, 347, 346, 345, 344, 343, 342, 341, 340, 339, 338, 337, 336, 335, 334, 333, 332, 331, 330, 329, 328, 327, 326, 325, 324, 323, 322, 321, 320, 319, 318, 317, 316, 315, 314, 313, 312, 311, 310, 309, 308, 307, 306, 305, 304, 303, 302, 301, 300, 299, 298, 297, 296, 295, 294, 293, 292, 291, 290, 289, 288, 287, 286, 285, 284, 283, 282, 281, 280, 279, 278, 277, 276, 275, 274, 273, 272, 271, 270, 269, 268, 267, 266, 265, 264, 263, 262, 261, 260, 259, 258, 257, 256, 255, 254, 253, 252, 251, 250, 249, 248, 247, 246, 245, 244, 243, 242, 241, 240, 239, 238, 237, 236, 235, 234, 233, 232, 231, 230, 229, 228, 227, 226, 225, 224, 223, 222, 221, 220, 219, 218, 217, 216, 215, 214, 213, 212, 211, 210, 209, 208, 207, 206, 205, 204, 203, 202, 201, 200, 199, 198, 197, 196, 195, 194, 193, 192, 191, 190, 189, 188, 187, 186, 185, 184, 183, 182, 181, 180, 179, 178, 177, 176, 175, 174, 173, 172, 171, 170, 169, 168, 167, 166, 165, 164, 163, 162, 161, 160, 159, 158, 157, 156, 155, 154, 153, 152, 151, 150, 149, 148, 147, 146, 145, 144, 143, 142, 141, 140, 139, 138, 137, 136, 135, 134, 133, 132, 131, 130, 129, 128, 127, 126, 125, 124, 123, 122, 121, 120, 119, 118, 117, 116, 115, 114, 113, 112, 111, 110, 109, 108, 107, 106, 105, 104, 103, 102, 101, 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1]
```