

## Project 4: Proof of Work

### 1. Target Generation:

[illegible]

## 2. Solution Generation Function:

```
Trying s = 585, Hash: 000474063cd271539fc34a52a0aa7a278111a53d1a3feb3711
9624863fb472ff
Found s: 585
Total time: 0.0494 seconds
Verification result: 1
```

### 3. Verification Function:

```
Trying s = 585, Hash: 000474063cd271539fc34a52a0aa7a278111a53d1a3feb3711
9624863fb472ff
Found s: 585
Total time: 0.0494 seconds
Verification result: 1
```

#### 4. Performance of POW:

**D = 16:**

```
Trying s = 2987, Hash: 00000596f0b864d03c355c0408ee0400917a3b28aeef8ed0
86d6968221bc557
Found s: 2987
Total time: 0.2524 seconds
Verification result: 1
```

**D = 17:**

```
Trying s = 2987, Hash: 00000596f0b864d03c355c0408ee0400917a3b28aeef8ed086d6968221bc557
Found s: 2987
Total time: 0.1966 seconds
Verification result: 1
```

**D = 18:**

```
Trying s = 2986, Hash: 380540a567c6e8a7123a6c362f0d47eccdbb7b8c498cbbeab7eab7c2eb13eb26
Trying s = 2987, Hash: 00000596f0b864d03c355c0408ee0400917a3b28aeeef8ed086d6968221bc557
Found s: 2987
Total time: 0.2143 seconds
Verification result: 1
```

**D = 19:**

```
Trying s = 2986, Hash: 380540a567c6e8a7123a6c362f0d47eccdbb7b8c498cbbeab7eab7c2eb13eb26
Trying s = 2987, Hash: 00000596f0b864d03c355c0408ee0400917a3b28aeeef8ed086d6968221bc557
Found s: 2987
Total time: 0.2267 seconds
Verification result: 1
```

**D = 20:**

```
Found s: 2987
Total time: 0.1985 seconds
Verification result: 1
```

**D = 21:**

```
Trying s = 2986, Hash: 380540a567c6e8a7123a6c362f0d47eccdbb7b8c498cbbeab7eab7c2eb13eb26
Trying s = 2987, Hash: 00000596f0b864d03c355c0408ee0400917a3b28aeeef8ed086d6968221bc557
Found s: 2987
Total time: 0.1947 seconds
Verification result: 1
```

**D = 22:**

```
Trying s = 10102885, Hash: 0000012db35a215bed7d5aea289c10adf9039e53ba0040cb9d5d59fb19e442f2
Found s: 10102885
Total time: 721.9538 seconds
Verification result: 1
```

**D = 23:**

```
Trying s = 10102885, Hash: 0000012db35a215bed7d5aea289c10adf9039e53ba0040cb9d5d59fb19e442f2
Found s: 10102885
Total time: 734.6010 seconds
Verification result: 1
```

**D = 24:**

```
Trying s = 27286059, Hash: 9e0490eacb957f8a86e5f4b09b50579eafd5227413404563701dc73a58c1ca59
Trying s = 27286060, Hash: 0000000b83b91ea409f7c458b88ff9f54a62f553dfe066d0fe4f1047e3f8e402
Found s: 27286060
Total time: 1927.4975 seconds
Verification result: 1
```

**Running the Code:**

Add this project to Visual Studio Code, and run it normally.