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# **P2P File Sharing Software**

**Cedric Bone**

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## CEDRIC\_BONE\_PROJECT

### 1.1 cli module

Command-line interface for P2P file sharing app

**class** `cli.CommandLine`(*node*)

Bases: `object`

Command-line interface

**connect**(*args*)

Connect to peer

**download**(*args*)

Download a file

**download\_thread**(*peer, filename*)

Thread function for downloading

**list**(*args*)

List local files

**peers**(*args*)

List peers

**search**(*args*)

Search for files

**start**()

Start the CLI

### 1.2 main module

Main for P2P file sharing app

`main.main()`

### 1.3 node module

P2P node for file sharing

```
class node.P2PNode(shared_dir)
    Bases: object
    Modded simple version P2P file sharing from BitTorrent

    add_peer(ip, port)
        Manually add a peer

    download_chunk(peer, filename, chunk_index)
        Download a file chunk

    download_file(peer, filename)
        Download file

    get_file_info(file_path)
        File metadata

    get_files()
        list of local files

    get_peers()
        Get list of peers

    handle_chunk_request(client, request)
        Handle file chunk request

    handle_client(client, addr)
        Handle client request

    handle_info_request(client, request)
        Handle file info request

    handle_list_request(client)
        Request for file list

    index_files()
        Index files indirectory

    maintenance()
        Periodic maintenance

    remove_peer(ip, port)
        Remove a peer

    request_file_info(peer, filename)
        Request file

    request_file_list(peer)
        Request file list from peer

    run_server()
        Run server to handle incoming requests

    search_files(query)
        Search for files matching query

    start()
        Start P2P node
```



**stop()**

Stop P2P node

## 1.4 utils module

Utility functions for P2P file sharing application

**utils.find\_free\_port()**

Find available port



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