

# BitTorrent File Sharing Using qBittorrent – Transfer of Alchemist.pdf

## 1. Aim

To create and distribute a torrent file for **Alchemist.pdf** using qBittorrent and demonstrate peer-to-peer file sharing.

## 2. Objective

- To understand Peer-to-Peer (P2P) networking
- To create a torrent metadata file
- To perform seeding and downloading
- To verify file integrity after transfer

## 3. System Requirements

### Hardware

- Computer with Internet connection

### Software

- Operating System: Windows
- Torrent Client: qBittorrent
- File Used: Alchemist.pdf

## 4. BitTorrent Architecture

Seeder shares the file → Tracker helps peer discovery → Peers exchange file pieces directly  
→ File reconstructed at receiver.

## 5. Torrent Creation

1. Open qBittorrent
2. Use Torrent Creator
3. Select Alchemist.pdf
4. Add public trackers
5. Create .torrent file

## 6. Seeding and Downloading

- Seeder loads torrent and starts sharing
- Downloader loads torrent file and receives file pieces
- Transfer occurs using P2P communication

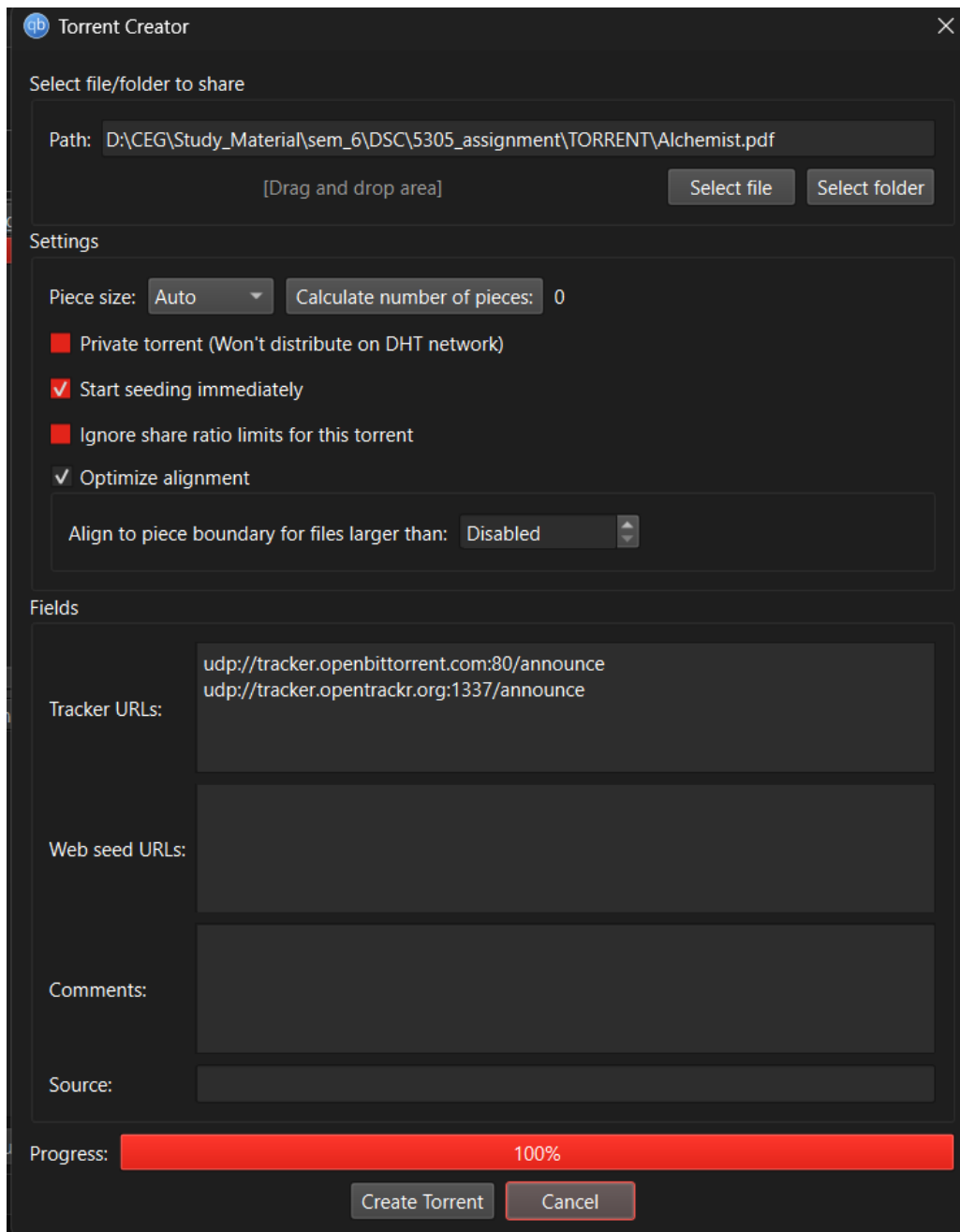
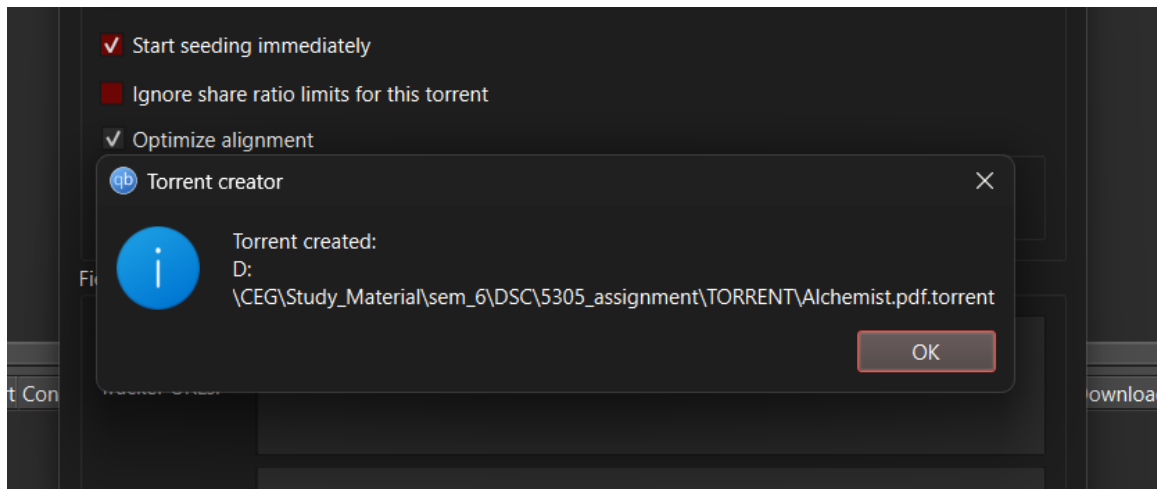
## 7. File Integrity Verification

BitTorrent verifies each piece using hash values. Downloaded Alchemist.pdf matches the original file.

## 8. Output

The screenshot shows the 'qBittorrent Creator' window with the following configuration:

- Select file/folder to share:** Path: D:\CEG\Study\_Material\sem\_6\DSC\5305\_assignment\TORRENT\Alchemist.pdf. Buttons: [Drag and drop area], Select file, Select folder.
- Settings:**
  - Piece size: Auto (dropdown), Calculate number of pieces: 0
  - ☐ Private torrent (Won't distribute on DHT network)
  - ☒ Start seeding immediately
  - ☐ Ignore share ratio limits for this torrent
  - ☒ Optimize alignment
  - Align to piece boundary for files larger than: Disabled (dropdown)
- Fields:**
  - Tracker URLs: udp://tracker.openbittorrent.com:80/announce, udp://tracker.opentracker.org:1337/announce
  - Web seed URLs: (empty)
  - Comments: (empty)
  - Source: (empty)
- Progress:** 0% (progress bar)
- Buttons:** Create Torrent, Cancel



#	Name	Size	Progress	Status	Seeds	Peers	Down Speed	Up Speed	ETA	Ratio
1	Alchemistp...	2.1 MiB	100%	Seeding	0 (1)	0 (0)	0 B/s	0 B/s	∞	0.0

#	Name	Size	Progress	Status	Seeds	Peers	Down Speed	Up Speed	ETA	Ratio
1	Alchemistp...	2.1 MiB	100%	Completed	0 (0)	0 (0)	0 B/s	0 B/s	∞	0.0

## 9. Result

The torrent file was successfully distributed and the file was downloaded with integrity verification.

## 10. Conclusion

This experiment demonstrated decentralized file sharing using BitTorrent and qBittorrent.