Node 节点设计

1. 代码框图

```
         Entry
           │
           ▼
    (1) Connect to
        Tracker
           │ connected
           ▼
    (2) Request
   Tracker for URL  ◄──────┐
           │ received URL  │
           ▼               │
    Is XPath in ── no ──► (3) Request
      list?              Tracker for XPath
           │ yes               │
           ▼                   │
   Parse webpage by  ◄─────────┘
       XPath
           │
           ▼
   (4) Submit data
      to Tracker
```

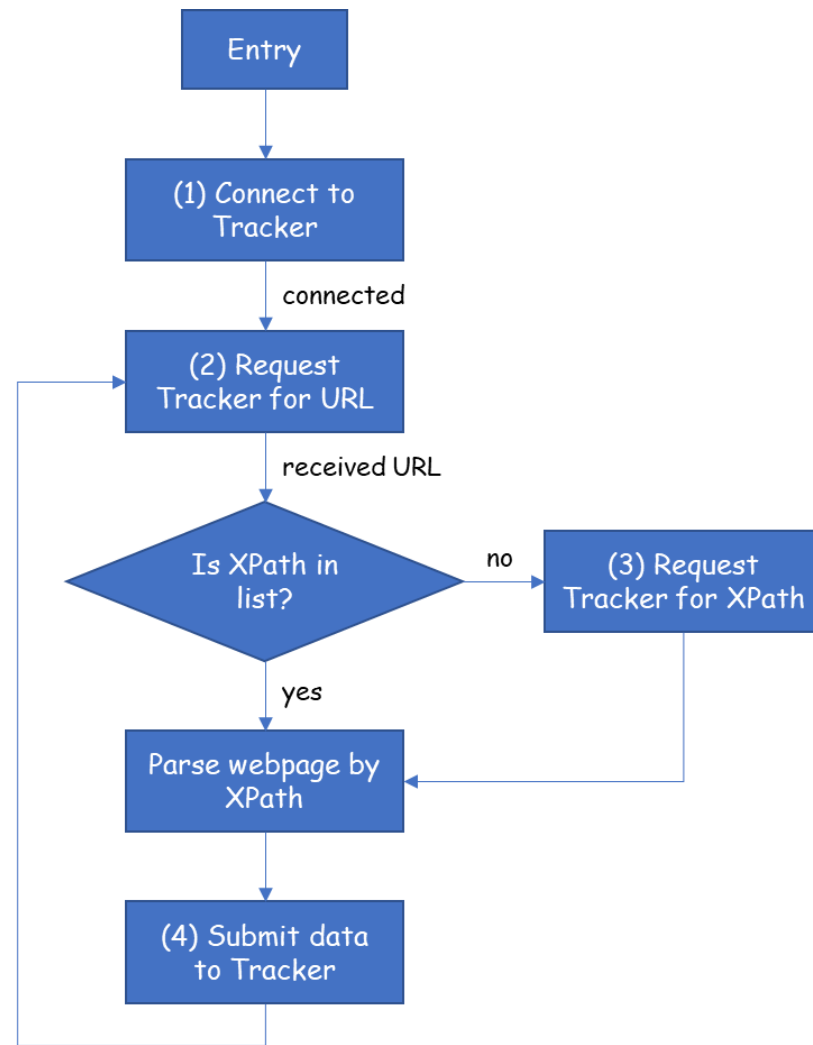## 2. 数据格式

（1）Connect to Tracker

请求：

```
{
    "id": 12345678,
    "cmd": "connect",
    "data": ""
}
```

响应：

```
{
    "id": 12345678,
    "status": 100 | 101,
    "info": "success" | "failed",
    "data": ""
}
```

（2）Request Tracker for URL

请求：

```
{
    "id": 12345678,
    "cmd": "task",
    "data": {
        "count": 1
    }
}
```

响应：

```
{
    "id": 12345678,
    "status": 200 | 201 | 210,
    "info": "success" | "failed" | "empty",
    "data": {
        "urls": [...]
    }
}
```

（3）Request Tracker for XPath

请求：

```
{
    "id": 12345678,
    "cmd": "xpath",
    "data": {
        "host": "news.sohu.com"
    }
}
```

响应：

```
{
    "id": 12345678,
    "status": 300 | 301,
    "info": "success" | "failed",
    "data": {
        "news.sohu.com": {
            "title": "//div[@id=title]",
            ...
        }
    }
}
```

（4）Submit data to Tracker

请求：

```
{
    "id": 12345678,
    "cmd": "task",
    "data": [{...}, {...}, ...]
}
```

响应：

```
{
    "id": 12345678,
    "status": 400 | 401 | 410,
    "info": "success" | "failed" | "exit",
    "data": ""
}
```