Api Documentation

Here's a comprehensive API documentation in Markdown format for your Cost Management API:

~~~
# Cost Management API Documentation

## Base URL
`https://localhost:5047` (or your assigned port)

## Authentication
None required (for development)

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## Cost Entries

### Get All Cost Entries
**Endpoint:** `GET /api/costentries`

**Response:**
```json
[
  {
    "id": 1,
    "category": "Office Supplies",
    "amount": 150.00,
    "date": "2023-05-15",
    "description": "Printer paper",
    "createdAt": "2023-05-15T10:30:00"
  }
]
~~~

Create Cost Entry

Endpoint: `POST /api/costentries`

Request Body:

```
{
  "category": "Travel",
  "amount": 350.00,
  "date": "2023-05-20",
  "description": "Client meeting"
}
```

Response (201 Created):

```
{
  "id": 3,
  "category": "Travel",
  "amount": 350.00,
  "date": "2023-05-20",
  "description": "Client meeting",
  "createdAt": "2023-05-20T14:25:00"
}
```

Get Cost Entry by ID

Endpoint: `GET /api/costentries/{id}`

Response:

```
{
  "id": 1,
  "category": "Office Supplies",
  "amount": 150.00,
  "date": "2023-05-15",
  "description": "Printer paper",
  "createdAt": "2023-05-15T10:30:00"
}
```

Invoices

Get All Invoices

Endpoint: `GET /api/invoices`

Response:

```
[
  {
    "id": 1001,
    "clientId": "CL001",
    "items": [
      {
        "name": "Web Design",
        "quantity": 10,
        "unitPrice": 75.00
      }
    ],
    "subtotal": 750.00,
    "discounts": 0.05,
    "taxRate": 0.08,
    "taxAmount": 60.00,
    "total": 810.00,
    "dueDate": "2023-06-15",
    "status": "pending"
  }
]
```

Create Invoice

Endpoint: `POST /api/invoices`

Request Body:

```
{
  "clientId": "CL001",
  "items": [
    {
      "name": "Consulting",
      "quantity": 5,
      "unitPrice": 200.00
    }
  ],
  "taxRate": 0.08,
  "discounts": 0.10
}
```

Response (201 Created):

```
{
  "id": 1002,
  "clientId": "CL001",
  "items": [
    {
      "name": "Consulting",
      "quantity": 5,
      "unitPrice": 200.00
    }
  ],
  "subtotal": 1000.00,
  "discounts": 0.10,
  "taxRate": 0.08,
  "taxAmount": 72.00,
  "total": 972.00,
  "dueDate": "2023-06-20",
  "status": "pending"
}
```

Update Invoice

Endpoint: `PUT /api/invoices/{id}`

Request Body:

```
{
  "items": [
    {
      "name": "Consulting",
      "quantity": 6,
      "unitPrice": 200.00
    }
  ],
  "discounts": 0.15
}
```

Response:

```
{
  "id": 1002,
  "clientId": "CL001",
  "items": [
    {
      "name": "Consulting",
      "quantity": 6,
      "unitPrice": 200.00
    }
  ],
  "subtotal": 1200.00,
  "discounts": 0.15,
  "taxRate": 0.08,
  "taxAmount": 81.60,
  "total": 1041.60,
  "dueDate": "2023-06-20",
  "status": "pending"
}
```

Send Invoice Reminder

Endpoint: `POST /api/invoices/{id}/reminders`

Optional Request Body:

```
{
  "dueDate": "2023-06-25",
  "clientContact": {
    "email": "custom@email.com"
  }
}
```

Response:

```
{
  "invoiceId": 1002,
  "recipient": "custom@email.com",
  "method": "email",
  "message": "Friendly reminder: Your invoice #1002 is due in 5 days.",
  "sentAt": "2023-06-20T09:15:00",
  "status": "sent"
}
```

Tax Calculations

Calculate Tax

Endpoint: `GET /api/tax/calculate?subtotal=1000&region=US-CA`

Response:

```
{
  "subtotal": 1000.00,
  "taxRate": 0.0825,
  "taxAmount": 82.50,
  "total": 1082.50
}
```

Get Tax Rate by Region

Endpoint: `GET /api/tax/rates/{region}`

Example: `GET /api/tax/rates/US-NY`

Response:

```
{
  "region": "US-NY",
  "taxRate": 0.08875
}
```

Error Responses

400 Bad Request

```
{
  "type": "<https://tools.ietf.org/html/rfc7231#section-6.5.1>",
  "title": "Bad Request",
  "status": 400,
  "traceId": "00-12345abcde67890-abcdef123456-00"
}
```

404 Not Found

```
{
  "type": "<https://tools.ietf.org/html/rfc7231#section-6.5.4>",
  "title": "Not Found",
  "status": 404,
  "traceId": "00-12345abcde67890-abcdef123456-00"
}
```

Sample Use Cases

1. **Creating and tracking expenses:**

   ```
   POST /api/costentries
   ```

2. **Generating client invoices:**

   ```
   POST /api/invoices
   ```

3. **Sending payment reminders:**

   ```
   POST /api/invoices/1001/reminders
   ```

4. **Calculating regional taxes:**

   ```
   GET /api/tax/calculate?subtotal=500&region=EU-DE
   ```

Rate Limits

None currently implemented (development only)

Data Persistence

All data is stored in memory and will reset when the application restarts

```

You can save this as `API_DOCUMENTATION.md` in your project directory.
This documentation includes:

1. All available endpoints with examples
2. Request/response formats
3. Sample use cases
4. Error responses
5. Important notes about the API behavior

Would you like me to add any additional sections or modify any part of this
documentation?
```