

iBudget API Specification

These are our initial API's and can be updated during and post development process of the project:

API endpoint	profile	
method	get	
Request Params	Type	Description
user_id	integer	Identifies the current user's info.
authorization_token	string	The token string indicates that the application has been given authority by the user.
This endpoint first checks if the token string is a legitimate token. If the token is valid, then it will get the user's credentials and will send a status 200 code and the response data in json format. Otherwise, it will return an error message.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
user_name	string	User's username
first_name	string	User's first name
middle_name	string	User's middle name
last_name	string	User's last name
birthdate	string	User's birthdate
gender	string	User' gender

Sample Response		
<pre>{ user_name: "johndoe", first_name: "John", middle_name: "Dee", last_name: "Doe", birthdate: "12/01/1997", gender: "Male" }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
error_message	string	Error message when authorization is unsuccessful.
Sample Response		
Unsuccessful Authorization!		

API endpoint	profile_edit	
method	post	
Request Params	Type	Description
user_id	integer	Identifies which user's profile will be updated.
authorization_token	string	The token string indicates that the application has been given authority to edit the profile.
Request Data	Type	Description
user_name	string	User's updated username
first_name	string	User's updated first name

middle_name	string	User's updated middle name
last_name	string	User's updated last name
birthdate	string	User's updated birthdate
gender	string	User's updated gender
This endpoint first checks if the token string is a legitimate token. If the token is valid, then it will edit and update the user's credentials and will send a status 200 code and the response data in json format. Otherwise, it will return with an error message.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
success_message	string	A text indicating a successful update of credentials.
updated_user	object	Contains the user's updated information.
Sample Response		
<pre>{ "success_message": "Profile updated successfully.", "updated_user": { "user_name": "janedee", "first_name": "Jane", "middle_name": "Doe", "last_name": "Dee", "birthdate": "12/01/1997", "gender": "Female" } }</pre>		
Fail		
Status Code	401	

Response Type	text	
Response Data	Type	Description
error_message	string	Displays the error message when authorization or update failed.
Sample Response		
Unsuccessful Authorization!		

API endpoint	forgot_password	
method	post	
Request Params	Type	Description
email	string	User's registered email requesting a password reset
This endpoint verifies if the user's email is registered and exists in the database. If it is, it will generate and send a reset token to the user's email. Otherwise, it will return an error message.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
success_message	string	A text indicating that a reset token has been sent successfully to the user's email.
reset_token	string	The generated token allows a password reset.
Sample Response		
<pre>{ "success_message": "Password reset link has been sent to your email !", "reset_token": "9f2a87c0b73d4f5a9d3e67f123456789" }</pre>		

Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
error_message	string	Displays an error message when an email is not found in the database or is not registered.
Sample Response		
Email address not found in our records.		

API endpoint	reset_password	
method	post	
Request Params	Type	Description
reset_token	string	The generated token that is sent to the user's email that authorizes a password reset.
new_password	string	The user's updated password.
confirm_password	string	The confirmation of password. Used to verify matching.
This endpoint checks and validates the user's reset token. If successful, it will update the user's password and save it to the database. Otherwise, it will display an error message.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
success_message	object	A text indicating that the user's password is successfully updated.
Sample Response		
{		

<pre>"success_message": "Password has been updated successfully !" }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
error_message	string	Displays an error message when a reset token validation failed.
Sample Response		
Invalid or expired reset token.		

API endpoint	settings	
method	get	
Request Params	Type	Description
user_id	string	Identifies which user's settings will be accessed.
authorization_token	string	The token string indicates that the application has been given authority to access the settings.
This endpoint verifies the user id and token. If validated correctly, it will retrieve the user's setting data, such as account settings, security settings, and account deletion settings. Otherwise, it will display an error message.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
account_settings	object	Part of a setting that allows modification to the user's profile.

security_settings	object	Part of a setting that allows modification to the user's password.
deletion_of_account	object	Part of a setting that allows the deletion of the user's account.

Sample Response

```
{
  "account_settings": {
    "first_name": "John",
    "middle_name": "Dee",
    "last_name": "Doe",
    "user_name": "johndoe",
    "birthdate": "12/01/1997",
    "gender": "Male"
  },
  "security_settings": {
    "password": "R9u!cF72@xQe#TzL",
    "new_password": "M@7vZp!rK2#tL9sE",
    "confirm_password": "M@7vZp!rK2#tL9sE"
  },
  "deletion_of_account": false
}
```

Fail

Status Code	401	
Response Type	text	
Response Data	Type	Description
error_message	string	Displays an error message when a token validation failed.

Sample Response

Unsuccessful Authorization!

API endpoint	update_settings
method	put

Request Params	Type	Description
user_id	string	Identifies which user's settings will be accessed.
authorization_token	string	The token string indicates that the application has been given authority to update the settings.
Request Body	Type	Description
account_settings	object	Part of a setting that contains the updated user profile data.
security_settings	object	Part of a setting that contains the updated user password
deletion_of_account	object	Part of a setting that contains the updated state of the user's account (Deleted or Not Deleted).
This endpoint verifies the user id and token. If validated correctly, it will update the user's setting data, such as account settings, security settings, and account deletion settings. Otherwise, it will display an error message.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
message	string	A text that indicates the changes in the settings were successfully made.
updated_settings	object	An object that contains the updated data made in each settings.
Sample Response <pre>{ "message": "Settings updated successfully.", "updated_settings": { "account_settings": { "first_name": "John", "middle_name": "Dee", "last_name": "Doe", "user_name": "johnny_doe", "birthdate": "12/01/1997", "gender": "Male" } } }</pre>		

<pre> }, "security_settings": { "password_updated": true }, "deletion_of_account": false } } </pre>		
Fail		
Status Code	401	
Response Type	JSON	
Response Data	Type	Description
error_message	string	Displays an error message when a token validation failed or old password is incorrect.
Sample Response		
Unsuccessful Authorization!		
<pre> { "error_message": "Unauthorized access. Invalid token." } </pre>		
<pre> { "error_message": "Old password is incorrect." } </pre>		

API Endpoint	user_register	
method	GET	
Request Parameters	Type	Description
token	string	Bearer token for authentication
<p>The endpoint first checks if the token string is a legitimate authentication token. If the token is valid, the system retrieves the corresponding user data from the database and returns it in the response with a status code of 200. Otherwise, it will return an error message indicating invalid or unauthorized access.</p>		
Success		
Status Code	200	

Response Type	JSON	
Response Data	Type	Description
user_name	string	User's username.
email	string	User's email.
first_name	string	User's first name.
middle_name	string	User's middle name.
last_name	string	User's last_name
birthdate	string	User's birthdate.
gender	string	User's gender
Sample Response		
<pre>{ "user_name": johndoe, "first_name": "John", "middle_name": "Dee", "last_name": "Doe", "email": "johndoe@sample.com", "birthdate": "08/30/1985", "gender": "Male", }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
error_message	text	Error message when authorization is unsuccessful.
Sample Response		
Unsuccessful operation.		

API Endpoint	user_verify_email	
method	GET	
Request Parameters	Type	Description
token	string	Verification token sent via email.

The endpoint first checks if the token string is a legitimate verification token. If the token is valid, the system marks the user's account as verified and allows login access.

Success

Status Code	200	
Response Type	JSON	
Response Data	Type	Description
success	string	Email successfully verified.

Sample Response

```
{
  "success": "Email successfully verified."
}
```

Fail

Status Code	404	
Response Type	text	
Response Data	Type	Description
error_message	string	Invalid or expired verification token.

Sample Response

```
{
  "error_message": "Invalid or expired token."
}
```

API Endpoint	user_login	
method	POST	
Request Parameters	Type	Description
email	string	Registered email address.
password	string	Account password.
This endpoint authenticates the user credentials. If valid and the email is verified, the system issues a login token used for authorized access to all other endpoints.		
Success		
Status Code	200	

Response Type	JSON	
Response Data	Type	Description
token	string	Authentication token
success	string	Login successful.
Sample Response		
<pre>{ "success": "Login successful.", "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXLTJ5In0:" }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
error_message	string	Invalid email or password/Email not verified.
Sample Response		
<pre>{ "error_message": "Invalid email or password." }</pre>		

API Endpoint	configuration	
Establishes a connection to the database and returns status feedback.		
Success		
Status Code	500	
Response Type	text	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
{ "message": "Connected to database";		

}		
Fail		
Status Code	404	
Response Type	text	
Response Data	Type	Description
message	text	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
{ "message": "Unsuccessful operation"; }		

API Endpoint		logout	
This api endpoint destroys the session in the browser.			
Success			
Status Code	500		
Response Type	text		
Response Data	Type	Description	
message	string	contains a message that indicates a successful or unsuccessful operation.	
Sample Response			
{ "message": "Logout successful"; }			
Fail			
Status Code	404		
Response Type	text		
Response Data	Type	Description	
message	text	contains a message that indicates a successful or unsuccessful operation.	
Sample Response			
{ "message": "Logout unsuccessful"; }			

API Endpoint	add_transaction	
method	POST	
Request Parameters	Type	Description
user id	int	this will be fetched through the established session id.
category	string	indicates if a transaction is income or expense.
amount	int	the amount of the transaction
description	string	the description of the transaction
transaction date	string	the date of the transaction
is_deleted	string	a boolean that indicates if a transaction is deleted or not.
created_at	string	the date and time of when the transaction is inserted to the database.
This endpoint sends transaction data to the database and appends the data to the transaction table.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
<pre>{ "message": "Transaction added"; }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.

Sample Response

```
{
  "message": "Failed to insert transaction."
}
```

API Endpoint	update_transaction	
method	POST	
Request Parameters	Type	Description
user id	int	this will be fetched through the established session id.
category	string	indicates if a transaction is income or expense.
amount	int	the amount of the transaction
description	string	the description of the transaction
transaction date	string	the date of the transaction
is_deleted	string	a boolean that indicates if a transaction is deleted or not.
created_at	string	the date and time of when the transaction is inserted to the database.
This endpoint receives updated transaction data and applies changes to an existing record in the transaction table.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
{ "message": "Transaction updated"; }		
Fail		
Status Code	401	

Response Type	text	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
<pre>{ "message": "Failed to update transaction." }</pre>		

API Endpoint	delete_transaction	
method	POST	
Request Parameters	Type	Description
user id	int	this will be fetched through the established session id.
transaction id	int	the identifier of a transaction
This endpoint softly deletes the transaction of the user.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
<pre>{ "message": "Transaction deleted"; }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.

Sample Response

```
{
  "message": "Failed to delete transaction."
}
```

API Endpoint		read_transaction	
method		GET	
Request Parameters		Type	Description
user id		int	this will be fetched through the established session id.
This endpoint fetches all the transactions of the user.			
Success			
Status Code		200	
Response Type		JSON	
Response Data		Type	Description
transaction_id		string	contains a message that indicates a successful or unsuccessful operation.
category_id		int	indicates if a transaction is income or expense.
amount		int	the amount of the transaction
description		string	the description of the transaction
transaction_date		string	the date of the transaction
is_deleted		string	a boolean that indicates if a transaction is deleted or not.
created_at		string	the date and time of when the transaction is inserted to the database.
Sample Response			
<pre>{ "transaction_id": 1, "category_id": 1, "amount": 100, "description": "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas vestibulum.", "transaction_date": "2025-10-09", }</pre>			

<pre>"is_deleted": false, "created_at": "2025-10-09" }</pre>		
Fail		
Status Code	401	
Response Type	text	
Response Data	Type	Description
message	string	contains a message that indicates a successful or unsuccessful operation.
Sample Response		
<pre>{ "message": "Failed to fetch transactions." }</pre>		

API Endpoint	main_dashboard	
method	GET/POST	
Description	Displays the primary dashboard overview with summary statistics including total income, total expenses, current balance, recent transactions, and budget progress indicators.	
Request Parameters	Type	Description
user_id	integer	Fetches through established session token
authorization_token	string	Bearer token for authentication
data_range	string	(Optional) Filter data by date range (e.g., "last_30_days", "this_month", "this_year")
The endpoint validates the authorization token and retrieves comprehensive financial summary data for the authenticated user. It aggregates total income and expenses, calculates the current balance, fetches recent transactions (typically last 10), and computes budget utilization percentages for each category. The data is returned in JSON format for dashboard rendering.		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
total_income	decimal	Sum of all income transactions
total_expenses	decimal	Sum of all expense transactions
current_balance	decimal	Calculated balance (income-expenses)
recent_transactions	array	List of recent transaction objects (last 10)
budget_summary	array	Budget categories with spending vs limit
saving_progress	decimal	Percentage of savings goal achieved
Sample Response		

```

{
  "total_income": 50000.00,
  "total_expenses": 32500.00,
  "current_balance": 17500.00,
  "Recent_transactions": [
    {
      "transaction_id": 125,
      "category": "Groceries",
      "amount": 1500.00,
      "Type": "expense",
      "date": "2025-10-08",
      "description": "Weekly grocery shopping"
    },
    {
      "transaction_id": 124,
      "category": "Salary",
      "amount": 25000.00,
      "Type": "income",
      "date": "2025-10-05",
      "description": "Monthly salary"
    }
  ],
  "budget_summary": [
    {
      "category": "Food",
      "spent": 8500.00,
      "limit": 10000.00,
      "percentage": 85
    },
    {
      "category": "Transportation",
      "spent": 3000.00,
      "limit": 5000.00,
      "percentage": 60
    }
  ],
  "savings_progress": 45.5
}

```

Fail

Status Code	401
Response Type	JSON

Response Data	Type	Description
error_message	string	Unauthorized access or invalid token
Sample Response		
<pre>{ "error_message": "Unauthorized access. Please log in again." }</pre>		

API Endpoint	analysis_dashboard	
method	POST	
Description	Provides detailed financial analytics including spending patterns, category breakdowns, trends over time, and comparative analysis for data-driven budget insights.	
Request Parameters	Type	Description
user_id	integer	Fetches through established session token
authorization_token	string	Bearer token for authentication
period	string	Analysis period ("weekly", "monthly", "quarterly", "yearly")
start_date	string	(Optional) Custom period start date (YYYY-MM-DD)
end_date	string	(Optional) Custom period end date (YYYY-MM-DD)
<p>This endpoint performs comprehensive financial analysis by aggregating transaction data across specified time periods. It calculates category-wise spending distributions, identifies spending trends, compares current period with previous periods, and generates insights such as top spending categories and unusual spending patterns. The analysis data is formatted for chart rendering and visual representation.</p>		
Success		
Status Code	200	
Response Type	JSON	
Response Data	Type	Description
spending_by_category	array	Breakdown of expenses by category

income_vs_expense_trend	array	Time-series data of income and expenses
monthly_comparison	object	Current vs previous month comparison
top_spending_categories	array	Ranked list of highest expense categories
spending_insights	array	AI-generated or rule-based insights
forecast	object	Projected spending for next period

Sample Response

```
{
  "spending_by_category": [
    {
      "category": "Food & Dining",
      "amount": 8500.00,
      "percentage": 35,
      "color": "#FF6384"
    },
    {
      "category": "Transportation",
      "amount": 3000.00,
      "percentage": 12,
      "color": "#36A2EB"
    },
    {
      "category": "Utilities",
      "amount": 2500.00,
      "percentage": 10,
      "color": "#FFCE56"
    }
  ],
  "income_vs_expense_trend": [
    {
      "month": "June 2025",
      "income": 48000.00,
      "expenses": 31000.00
    },
    {
      "month": "July 2025",
      "income": 50000.00,
      "expenses": 29500.00
    },
    {
      "month": "August 2025",
      "income": 50000.00,
      "expenses": 32500.00
    }
  ],
  "monthly_comparison": {
    "current_month_expenses": 32500.00,
    "previous_month_expenses": 29500.00,
  }
}
```

```

    "change_percentage": 10.17,
    "status": "increased"
  },
  "top_spending_categories": [
    {
      "rank": 1,
      "category": "Food & Dining",
      "amount": 8500.00
    },
    {
      "rank": 2,
      "category": "Shopping",
      "amount": 6000.00
    },
    {
      "rank": 3,
      "category": "Entertainment",
      "amount": 4500.00
    }
  ],
  "spending_insights": [
    "Your food expenses increased by 15% this month",
    "You're on track to meet your savings goal",
    "Transportation costs are below budget by 40%"
  ],
  "forecast": {
    "next_month_projected_expenses": 33500.00,
    "confidence_level": "medium"
  }
}

```

Fail

Status Code	401	
Response Type	JSON	
Response Data	Type	Description
error_message	string	Authorization failure or data retrieval error

Sample Response

```

{
  "error_message": "Failed to generate analysis. Insufficient data or unauthorized access "
}

```


API Endpoint	transact_dashboard	
method	GET/POST	
Description	Displays and manages the complete transaction history with filtering, sorting, and search capabilities. Allow users to view, add, edit, and delete transactions from a centralized interface.	
Request Parameters	Type	Description
user_id	integer	Fetches through established session token
authorization_token	integer	Bearer token for authentication
page	integer	(Optional) Pagination page number (default: 1)
limit	integer	(Optional) Number of transactions per page (default: 20)
filter_category	string	(Optional) Filter by specific category ID or name
filter_type	string	(Optional) Filter by transaction type ("income" or "expense")
search_query	string	(Optional) Search transactions by description
sort_by	string	(Optional) Sort field ("date", "amount", "category")
sort_order	string	(Optional) Sort direction ("asc" or "desc")
date_from	string	(Optional) Filter start date (YYYY-MM-DD)
date_to	string	(Optional) Filter end date (YYYY-MM-DD)
This endpoint retrieves paginated transaction data for the authenticated user based on the provided filters and search criteria. It supports advanced querying including category filtering, transaction type filtering, date range selection, and text search through transaction descriptions. The results are sorted according to user preferences and returned with pagination metadata for efficient loading of large transaction histories.		
Success		
Status Code	200	
Response Type	JSON	

Response Data	Type	Description
transactions	array	List of transactions objects matching criteria
pagination	object	Pagination metadata (current_page, total pages, total records)
summary	object	Summary statistics for filtered transactions
available_categories	array	List of categories

Sample Response

```
{
  "transactions": [
    {
      "transaction_id": 145,
      "category": "Salary",
      "category_id": 1,
      "type": "income",
      "amount": 50000.00,
      "description": "Monthly salary - October 2025",
      "transaction_date": "2025-10-05",
      "created_at": "2025-10-05 09:30:00",
      "is_deleted": false
    },
    {
      "transaction_id": 144,
      "category": "Groceries",
      "category_id": 5,
      "type": "expense",
      "amount": 1500.00,
      "description": "Supermarket weekly shopping",
      "transaction_date": "2025-10-04",
      "created_at": "2025-10-04 18:45:00",
      "is_deleted": false
    },
    {
      "transaction_id": 143,
      "category": "Transportation",
      "category_id": 8,
      "type": "expense",
      "amount": 500.00,
      "description": "Fuel refill",
      "transaction_date": "2025-10-03",
      "created_at": "2025-10-03 14:20:00",
      "is_deleted": false
    }
  ],
  "pagination": {
    "current_page": 1,
    "total_pages": 8,
```

```
"total_records": 145,
"records_per_page": 20
},
"summary": {
  "total_income": 50000.00,
  "total_expenses": 12500.00,
  "transaction_count": 145,
  "date_range": "2025-01-01 to 2025-10-09"
},
"available_categories": [
  {
    "category_id": 1,
    "category_name": "Salary",
    "type": "income"
  },
  {
    "category_id": 5,
    "category_name": "Groceries",
    "type": "expense"
  },
  {
    "category_id": 8,
    "category_name": "Transportation",
    "type": "expense"
  }
]
}
```

Fail

Status Code	401	
Response Type	JSON	
Response Data	Type	Description
error_message	string	Error retrieving transactions or unauthorized access

Sample Response

```
{
  "error_message": "Failed to retrieve transactions. Please verify your authentication."
}
```

API Endpoint	index.php	
method	GET	
Request Parameters	Type	Description
No parameters required for initial page load	NONE	Serves as the landing page and authentication gateway. Checks if the user has an active session. If authenticated, redirects to the main dashboard; otherwise, displays login/registration interface.
[API Process Explanation] When a user accesses index.php, the system checks for an existing authentication token in the session. If a valid token exists, the user is automatically redirected to their main dashboard. If no valid session is found, the login page interface is displayed, allowing users to either log in or navigate to registration.		
Success		
Status Code	200	Description
Response Type	JSON	Returns authentication status and redirects authenticated users to main_dashboard
Response Data	Type	Description
authenticated	boolean	Indicates if user has valid session
redirect_url	string	URL to redirect authenticated users
message	string	Status message
Sample Response		
<pre># Authenticated { "authenticated": "true", "redirect-url": "/main_dashboard.php", "message": "Session valid. Redirecting to dashboard" } # Not Authenticated { "authenticated": "false", "message": "Please log-in to continue." }</pre>		
Fail		
Status Code	500	Description

Response Type	JSON	Error loading the authentication interface.
Response Data	Type	Description
message	string	Error message indicating system failure
Sample Response		
<pre>{ "error_message": "Unable to load authentication page. Please try again later." }</pre>		

