

BudgetPlanner

An application that can be used for personal budget planning.

Description:

BudgetPlanner is a C# Console Application created in Visual Studio, that allows users to enter their monthly incomes and expenses and calculates their available monthly money.

How to use the BudgetPlanner App:

- 1) To start off, open up Visual Studio and select the option to open an existing Visual Studio project.
- 2) Select the BudgetPlanner folder and open up the **BudgetPlanner.sln** project.
- 3) Once the project is open, run the program by pressing the green arrow/ start button.
- 4) Once the program is running, the user will be prompted to follow the instructions and enter in the requested information such as their gross monthly income, their estimated tax deducted, expenses such as groceries, water and lights, travel costs, phone costs and if the user has any other expenses that have not been asked for, they are prompted to enter how many other expenses they have and then they are prompted to enter what the name of that expense is and what the cost is.
- 5) The user then chooses whether they are renting accommodation or buying a property.
- 6) If the user selects to rent, then the user is prompted to enter their monthly rental amount.
- 7) If the user selects to buy a property, then they will be prompted to enter the purchase price of the property, the total deposit amount, the home loan interest rate as well as the number of months they have to repay the home loan. The home loan is then calculated and if the home loan repayment is more than a third of the user's gross monthly income, then a warning is displayed indicating that the home loan is unlikely.
- 8) Once the relevant information has been provided, the application displays the user's incomes and expenses as well as the calculated amount of money left over for the month.

Examples of various scenarios with the BudgetPlanner App:

Figure 1 shows that the user chose to include 2 other expenses and since they are renting accommodation, they were prompted to enter their monthly rental amount.

Figure 1

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*****
BUDGET PLANNER
*****
Enter your gross monthly income (before deductions): R10000
Enter your estimated monthly tax deducted: R1000
Enter your estimated monthly expenditure for groceries: R500
Enter your estimated monthly expenditure for water and lights: R500
Enter your estimated monthly expenditure for travel costs (including petrol): R250
Enter your estimated monthly expenditure for cell phone and telephone: R250

Do you have any other expenses? Enter *1* for YES or any other key for NO: 1

Enter how many other expenses you have: 2

Enter the name of your other expense: Hockey
Enter your estimated monthly expenditure for Hockey: R150

Enter the name of your other expense: Netball
Enter your estimated monthly expenditure for Netball: R150

Validating Inputted Data. . .
5      4      3      2      1
The inputted data is valid!

Enter *1* if you are renting accommodation or *2* for buying a property: 1
Enter your monthly rental amount: R1500,50

Loading Data. . .
3      2      1

*****
Information and totals:
*****
Your gross monthly income (before deductions) is R10000
Your estimated monthly tax deducted is R1000
Your estimated monthly expenditure for groceries is R500
Your estimated monthly expenditure for water and lights is R500
Your estimated monthly expenditure for travel costs (including petrol) is R250
Your estimated monthly expenditure for cell phone and telephone is R250
Your estimated monthly expenditure for Hockey is R150
Your estimated monthly expenditure for Netball is R150
Your estimated monthly housing payment is R1500,5
The total amount of available monthly money after all the specified deductions have been made: R5699,5

*****
Thank you for using Budget Planner
*****

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Figure 2 shows that the user chose does not have any other expenses and since they are buying a property, they were prompted to enter the relevant information regarding paying back their home loan.

Figure 2

```

*****
BUDGET PLANNER
*****

Enter your gross monthly income (before deductions): R100000
Enter your estimated monthly tax deducted: R10000
Enter your estimated monthly expenditure for groceries: R500
Enter your estimated monthly expenditure for water and lights: R500
Enter your estimated monthly expenditure for travel costs (including petrol): R250,50
Enter your estimated monthly expenditure for cell phone and telephone: R350,50

Do you have any other expenses? Enter *1* for YES or any other key for NO: 0

Validating Inputted Data. . .
5      4      3      2      1

The inputted data is valid!

Enter *1* if you are renting accommodation or *2* for buying a property: 2
Enter the purchase price of your property: R50000
Enter the total deposit amount for your property: R10000
Enter the interest rate (percentage) for your property: 5
Enter the number of months (between 240 and 360) to repay your property: 250

Validating Home Loan Data. . .
5      4      3      2      1

The inputted home loan data is valid!

Loading Data. . .
3      2      1

*****
Information and totals:
*****
Your gross monthly income (before deductions) is R100000
Your estimated monthly tax deducted is R10000
Your estimated monthly expenditure for groceries is R500
Your estimated monthly expenditure for water and lights is R500
Your estimated monthly expenditure for travel costs (including petrol) is R250,50
Your estimated monthly expenditure for cell phone and telephone is R350,50
Your estimated monthly housing payment is R2160
The total amount of available monthly money after all the specified deductions have been made: R86239

*****
Thank you for using Budget Planner
*****

```

Figure 3 shows that the user chose does not have any other expenses and since they are buying a property, they were prompted to enter the relevant information regarding paying back their home loan, but this time, the loan is unlikely to be approved as the home loan repayment is more than a third of the user's gross monthly income and the user doesn't have any left over money.

Figure 3

```

BUDGET PLANNER
*****
Enter your gross monthly income (before deductions): R10000
Enter your estimated monthly tax deducted: R1000
Enter your estimated monthly expenditure for groceries: R500,50
Enter your estimated monthly expenditure for water and lights: R500
Enter your estimated monthly expenditure for travel costs (including petrol): R250
Enter your estimated monthly expenditure for cell phone and telephone: R250

Do you have any other expenses? Enter *1* for YES or any other key for NO: 4

Validating Inputted Data. . .
5      4      3      2      1
The inputted data is valid!

Enter *1* if you are renting accommodation or *2* for buying a property: 2
Enter the purchase price of your property: R10000000
Enter the total deposit amount for your property: R100
Enter the interest rate (percentage) for your property: 5
Enter the number of months (between 240 and 360) to repay your property: 245

Validating Home Loan Data. . .
5      4      3      2      1
The inputted home loan data is valid!

Warning!
Please note that the approval of your home loan is unlikely as the monthly repayments are more than a third of your gross monthly income!

Loading Data. . .
3      2      1
*****
Information and totals:
*****
Your gross monthly income (before deductions) is R10000
Your estimated monthly tax deducted is R1000
Your estimated monthly expenditure for groceries is R500,50
Your estimated monthly expenditure for water and lights is R500
Your estimated monthly expenditure for travel costs (including petrol) is R250
Your estimated monthly expenditure for cell phone and telephone is R250
Your estimated monthly housing payment is R5408157,86
There is no money left over after all the specified deductions have been made!
The amount that you are over by is: R5400658,36
*****

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Figure 4, Figure 5 and Figure 6 shows some of the possible instances where the user enters invalid numbers so the app displays an error message and re-prompts the user for valid data.

Figure 4

```

*****
BUDGET PLANNER
*****
Enter your gross monthly income (before deductions): Rhjk
Enter your estimated monthly tax deducted: R212.5
Enter your estimated monthly expenditure for groceries: Rui
Enter your estimated monthly expenditure for water and lights: R423d
Enter your estimated monthly expenditure for travel costs (including petrol): R
Enter your estimated monthly expenditure for cell phone and telephone: R90

Do you have any other expenses? Enter *1* for YES or any other key for NO: 1

Enter how many other expenses you have: k
Error!
"k" is not a valid number!

Enter how many other expenses you have: 2

Enter the name of your other expense: hockey
Enter your estimated monthly expenditure for hockey: R20.78

Enter the name of your other expense: netball
Enter your estimated monthly expenditure for netball: Rds

Validating Inputted Data. . .

5      4      3      2      1

Error!
"hjk" is not a valid number!
Enter your gross monthly income (before deductions): R10000.90

Error!
Please use ',' instead of '.'!
Enter your gross monthly income (before deductions): R10000,90

Error!
Please use ',' in R212.5 instead of '.'!
Enter your estimated monthly tax deducted: R212,5

Error!
"ui" is not a valid number!
Enter your estimated monthly expenditure for groceries: R20

Error!
"423d" is not a valid number!
Enter your estimated monthly expenditure for water and lights: R10

Error!
"" is not a valid number!

```

Figure 5

```

Error!
"" is not a valid number!
Enter your estimated monthly expenditure for travel costs (including petrol): R30

Error!
Please use ',' in R20.78 instead of '.'!
Enter your estimated monthly expenditure for hockey: R20,78

Error!
"ds" is not a valid number!
Enter your estimated monthly expenditure for netball: R19

The inputted data is valid!

Enter *1* if you are renting accommodation or *2* for buying a property: hjs

Error! Invalid option.
Enter *1* if you are renting accommodation or *2* for buying a property: 89

Error! Invalid option.
Enter *1* if you are renting accommodation or *2* for buying a property: 2
Enter the purchase price of your property: Rj
Enter the total deposit amount for your property: R90.20
Enter the interest rate (percentage) for your property: 5
Enter the number of months (between 240 and 360) to repay your property: 100

Validating Home Loan Data. . .
5      4      3      2      1

Error!
"j" is not a valid number!
Enter the purchase price of your property: R10000

Error!
Please use ',' in R90.20 instead of '.'!
Enter the total deposit amount for your property: R90,20

Error!
"100" is not within the 240-360 range!
Enter the number of months (between 240 and 360) to repay your property: 400

Error!
"400" is not within the 240-360 range!
Enter the number of months (between 240 and 360) to repay your property: 290

The inputted home loan data is valid!

Loading Data. . .
3      2      1

```

```
Figure 6

3      2      1
*****
Information and totals:
*****
Your gross monthly income (before deductions) is R10000,90
Your estimated monthly tax deducted is R212,5
Your estimated monthly expenditure for groceries is R20
Your estimated monthly expenditure for water and lights is R10
Your estimated monthly expenditure for travel costs (including petrol) is R30
Your estimated monthly expenditure for cell phone and telephone is R90
Your estimated monthly expenditure for hockey is R20,78
Your estimated monthly expenditure for netball is R19
Your estimated monthly housing payment is R529,66
The total amount of available monthly money after all the specified deductions have been r
*****
Thank you for using Budget Planner
*****
```

Figure 7 shows that the user has the option to rerun the BudgetPlanner App.

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Figure 7

*****
Thank you for using Budget Planner
*****
Would you like to use the Budget Planner app again?
Enter *1* for Yes or press any other key to exit: █
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