

Test Case ID	Scenario Description	Inputs	Expected Output	Pass/Fail	Notes
TC01	User with high debt, no savings, goal to buy a house	Income: \$4000 Expenses: \$3000 Savings: \$0 Debt: \$10000, Goal: buy a house	Suggests prioritizing debt repayment, budgeting, and realistic savings timeline	Pass	Tone should be helpful, non-judgmental tests 0 in input field.
TC02	User enters no financial goal	Income: \$5000 Expenses: \$2500 Savings: \$1000 Debt: \$5000 Goal: (blank)	AI prompts user to input a goal before giving advice	Pass	Validates input dependency
TC03	User with surplus income wants to retire early	Income: \$8000 Expenses: \$4000 Savings: \$20000 Debt: \$0 Goal: Retire at 50	AI suggests long-term investment, consistent savings, and retirement plan	Pass	Should include specific investment strategies AI recognizes no age given. Assumes age of 30.
TC04	User enters unrealistic goal with low income	Income: \$1500 Expenses: \$1400 Savings: \$50 Debt: \$2000 Goal: Buy Tesla in 6 months	AI recognizes unrealistic goal and advises focus on savings and debt Gives realistic timeline?	Pass	Tests graceful handling of extreme inputs AI says timeline is not viable w/ current stats
TC05	User enters negative input values	Income: -500 Expenses: \$2000 Savings: -100 Debt: -500 Goal: Save for emergency fund	AI warns or rejects invalid input values	Pass	Input validation test
TC06	User wants to build an emergency fund	Income: \$1800 Expenses: \$1500 Savings: \$100 Debt: \$0 Goal: Build emergency fund	AI gives advice on how to reach goal by reducing expenses and how much to put into savings. How much to keep for emergencies	Pass	
TC07	User with more expenses than income with high debt	Income: \$2000 Expenses: \$4000 Savings: \$2000 Debt: \$50000 Goal: I want to get out of debt	Similar to TC04. AI advises on reducing expenses and methods with amount to pay off debt	Pass	Remains helpful even if goal seems extreme
TC08	User with high income, no debt, maintenance goal	Income: \$10000 Expenses: \$2000 Savings: \$100000 Debt: \$0 Goal: Maintain lifestyle	AI confirms progress and recommends diversification	Pass	Tests advice quality in ideal scenario. Mentions hiring a professional for personalized advice. This overview is only starting point

TC09	User with timeline for retirement	Income: \$6000 Expenses: \$3000 Savings: \$150000 Debt: \$0 Goal: retire in 5 years	AI suggests reducing risk and exploring retirement accounts. Aggressive saving	Pass	gives advice on retirement planning. Investment strategies, predicts balance
TC10	User asks a question and not a goal	Income: \$3000 Expenses: \$1300 Savings: \$20000 Debt: \$4000 Goal: How much should I have in savings by the time I retire?	AI answers the question and how to reach said goal with given financial data	Pass	Still answers question. Predicts off current salary
TC11	User gives 2 goals	Income: \$4000 Expenses: \$3000 Savings: \$0 Debt: \$10000, Goal: Save for house. Buy a car	AI able to provide advice to reach both goals	Pass	Both goals considered.
TC12	User inputs words into inputs	Income: about \$3000 Expenses: \$1300 Savings: \$5000 Debt: \$1000 Goal: I want to buy a house	Program error. Tells user to reenter data	Pass	Does not allow user to type any letters. Does not show
TC13	User gives a range for input	Income: \$2000 - \$3000 Expenses: \$1300 Savings: \$5000 Debt: \$1000 Goal: I want to buy a house	Program error. Tells user to reenter data	Pass	Input field clears automatically if dash included
TC14	User gives goal for children's education fund	Income: \$3500 Expenses: \$3400 Savings: \$200 Debt: \$1500 Goal: Save for child's education	AI tailors savings specifically towards education accounts. Emphasizes consistency	Pass	Mentions 529 plan
TC15	User lost their job/ has no job	Income: \$0 Expenses: \$2000 Savings: \$5000 Debt: \$0 Goal: Stretch savings until reemployment	AI offers frugal strategies, emergency fund budgeting, applying for benefits, gives timeline	Pass	Assistance programs, AI stays positive

		Income: \$2000 Expenses: \$4000 Savings: \$2000 Debt: \$50000 Goal: I want to get out of debt	Charts have inconsistencies, AI gives advice as normal save_data() rejects	Fail	Different data can be entered for same month. can skew the graphs
TC16	User enters different inputs for the same month	Income: \$3000 Expenses: \$1300 Savings: \$20000 Debt: \$4000 Goal: How should I invest my savings?	AI suggests ETFs and different investments to diversify portfolio	Pass	diverse investment strategies. Suggests self education and hiring a licensed professional
TC17	User asks how to invest their savings	Income: \$1800 Expenses: \$1500 Savings: \$100 Debt: \$0 Goal: I want to stop working	AI advises against it. Gives advice on how to reach that goal. I.E. Retirement	Pass	Testing ambiguity. Different ways to not work. Geared towards retirement
TC18	User states they don't want to work anymore	Income: \$4000 Expenses: \$2200 Savings: \$25000 Debt: \$2000 Goal: I want to deplete my savings	AI gives financial advice so advises user against their goal	Pass	Testing for AI to go against user goals.
TC19	User wants to spend all of their money irresponsibly	Income: \$40000 Expenses: \$300,0 Savings: \$0 Debt: \$10000, Goal: Save for house	Program does not run and informs user to reenter data	Pass	Similar to TC12
TC20	There is a accidental typo in the input	Income: \$9999999999999999 Expenses: \$50000 Savings: \$500000 Debt: \$0 Goal: How many houses can I buy?	AI unable to properly give advice due to extremes	Pass	Runs as normal.
TC21	User enters extremely large number in input	Income: \$4000 Expenses: \$3000 Savings: \$0 Debt: \$10000, Goal: My name is James	AI still gives a response and realizes a financial goal was not given	Pass	Still analyzes inputs and creates a financial plan like normal
TC22	User gives a statement and does not enter a goal				