Since a bond is a debt instrument, bonds pay periodic interest payments based on the stated (coupon) rate and return the principal at the maturity.

Cash flows on a bond with no embedded options are fairly certain and the price of bond equals the present value of future interest payments plus the present value of the face value (which is returned at maturity) based on the interest rate prevailing in the market.

The present value of interest payments is calculated using the formula for present value of an annuity and the present value of the face value (also called the maturity value) is calculated using the formula for present value of a single sum occurring in future.

Please write a JavaScript program to enter the above information and calculate the following values: Present Value of Interest Payments and Present Value of Face Value of a Bond. Please prompt the user for any necessary input data to perform the calculations.

Once this code development is complete and running, then port the code into Remix. Using two of the test accounts in Remix write a Blockchain Smart Contract to Buy (function) and Sale (function) a $100 Bond with terms set by you. Note: the Smart Contract needs to expire (deactivate) when the Bond matures. US dollars for can be replaced by Ether ($155 US / Ether) in terms of fiat currency. Each test account user starts with 100 Ether by default.

Copy your working code to the space below and submit your assignment by February 27th 2019: