**Logo

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**CS360 - Programming in C and C++**

**Quiz #1**

**Student Name: Student ID:**

1. Write a program based on the following requirements
   1. Create a class, named *Smith*, including
      1. Public member: *int name*
      2. Protected member: *int m\_home*
      3. Private member: *int m\_wife*
      4. Public methods: constructor to initialize *name* to *1*, *m\_home* to *2* and *m\_wift* to *3,* and by-default destructor

* 1. Generate a class, named *Son\_Smith*, inherited from *Smith* including
     1. Private member: *int flag*
     2. Public method: constructor to initialize *flag* to *4*
  2. Declare a friend class of *Smith*, named *Friend\_Smith* including
     1. Public method: *void help(const Smith& sm)* to print *sm.name, sm.m\_home* and *sm.m\_wift*
  3. Create a class, named *Son\_friend\_Smith,* inherited from *Friend\_Smith*
     1. Public method: *void help(const Smith& uncle\_smith)* to print *uncle\_smith.name, uncle\_smith.m\_home, uncle\_smith.m\_wift* and call the function *help* in *Friend\_Smith* passing *uncle\_smith* as its argument
  4. In main function, verify all *help* functions in the classes, *Friend\_Smith, Son\_friend\_Smith* and *help* in *Friend\_Smith* with *Son\_Smith* object argument