**Unit #1: Introduction**

**Lab 1.2: Card Pairs**

**Directions**

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| Write a program that creates a hand of card objects and sorts them into pairs (or threes or fours) of like numbers. |

**Specifications/Requirements**

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| You must create a Card object and a Deck object. You can choose to create a Hand object if you would like. Once a pair is found, remove it from the hand and store it some sort of structure (array, vector, etc.). You can choose what is the best way to represent this. It should not change the user’s interaction with the program in any way. Be sure to create ways to nicely output both the Deck and a Card. This could be through functions or overridden operators.  When your program is run it should look just as the sample run below. How you implement it beyond creating the Card and Deck objects is up to you. Make sure you explore the features of C++ and attempt to utilize them when reasonable.  Make sure if you are running in to errors that you are keeping track (somehow) of how to fix them – remember that C++ error reporting isn’t particularly helpful! |

**Test Run**

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| The card being dealt is DA  The card being dealt is A7  The card being dealt is D5  The card being dealt is DJ  The card being dealt is D9  The card being dealt is C7  The card being dealt is SJ  Your hand is  DA, A7, D5, DJ, D9, C7, SJ  The current pairs are:  A7, C7  DJ, SJ  Your hand is now  DA, D5, D9  The card being dealt is C3  The card being dealt is D4  The card being dealt is CA  The card being dealt is AT  Your hand is  DA, D5, D9, C3, D4, CA, AT  The current pairs are:  A7, C7  DJ, SJ  DA, CA  Your hand is now  D5, D9, C3, D4, AT  The card being dealt is C5  The card being dealt is A9  Your hand is  D5, D9, C3, D4, AT, C5, A9  The current pairs are:  A7, C7  DJ, SJ  DA, CA  D5, C5  D9, A9  Your hand is now  C3, D4, AT  The card being dealt is S2  The card being dealt is AK  The card being dealt is CJ  The card being dealt is S4  Your hand is  C3, D4, AT, S2, AK, CJ, S4  The current pairs are:  A7, C7  DJ, SJ, CJ  DA, CA  D5, C5  D9, A9  D4, S4  Your hand is now  C3, AT, S2, AK  The card being dealt is D7  The card being dealt is CQ  The card being dealt is C6  Your hand is  C3, AT, S2, AK, D7, CQ, C6  The current pairs are:  A7, C7, D7  DJ, SJ, CJ  DA, CA  D5, C5  D9, A9  D4, S4  Your hand is now  C3, AT, S2, AK, CQ, C6  The card being dealt is S7  Your hand is  C3, AT, S2, AK, CQ, C6, S7  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ  DA, CA  D5, C5  D9, A9  D4, S4  Your hand is now  C3, AT, S2, AK, CQ, C6  The card being dealt is D2  Your hand is  C3, AT, S2, AK, CQ, C6, D2  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ  DA, CA  D5, C5  D9, A9  D4, S4  S2, D2  Your hand is now  C3, AT, AK, CQ, C6  The card being dealt is SK  The card being dealt is C2  Your hand is  C3, AT, AK, CQ, C6, SK, C2  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ  DA, CA  D5, C5  D9, A9  D4, S4  S2, D2, C2  AK, SK  Your hand is now  C3, AT, CQ, C6  The card being dealt is A3  The card being dealt is C9  The card being dealt is AJ  Your hand is  C3, AT, CQ, C6, A3, C9, AJ  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ, AJ  DA, CA  D5, C5  D9, A9, C9  D4, S4  S2, D2, C2  AK, SK  C3, A3  Your hand is now  AT, CQ, C6  The card being dealt is A5  The card being dealt is CT  The card being dealt is S8  The card being dealt is A6  Your hand is  AT, CQ, C6, A5, CT, S8, A6  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ, AJ  DA, CA  D5, C5, A5  D9, A9, C9  D4, S4  S2, D2, C2  AK, SK  C3, A3  AT, CT  C6, A6  Your hand is now  CQ, S8  The card being dealt is A2  The card being dealt is D6  The card being dealt is C4  The card being dealt is SA  The card being dealt is S3  Your hand is  CQ, S8, A2, D6, C4, SA, S3  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ, AJ  DA, CA, SA  D5, C5, A5  D9, A9, C9  D4, S4, C4  S2, D2, C2, A2  AK, SK  C3, A3, S3  AT, CT  C6, A6, D6  Your hand is now  CQ, S8  The card being dealt is A8  The card being dealt is SQ  The card being dealt is S6  The card being dealt is DT  The card being dealt is CK  Your hand is  CQ, S8, A8, SQ, S6, DT, CK  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ, AJ  DA, CA, SA  D5, C5, A5  D9, A9, C9  D4, S4, C4  S2, D2, C2, A2  AK, SK, CK  C3, A3, S3  AT, CT, DT  C6, A6, D6, S6  CQ, SQ  S8, A8  Your hand is empty.  The card being dealt is ST  The card being dealt is DK  The card being dealt is S5  The card being dealt is C8  The card being dealt is AQ  The card being dealt is D8  The card being dealt is AA  Your hand is  ST, DK, S5, C8, AQ, D8, AA  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ, AJ  DA, CA, SA, AA  D5, C5, A5, S5  D9, A9, C9  D4, S4, C4  S2, D2, C2, A2  AK, SK, CK, DK  C3, A3, S3  AT, CT, DT, ST  C6, A6, D6, S6  CQ, SQ, AQ  S8, A8, C8, D8  Your hand is empty.  The card being dealt is A4  The card being dealt is S9  The card being dealt is DQ  The card being dealt is D3  \*\*\*\*\*\*\*\*\*\*\*\*\*\*  A4, S9, DQ, D3  The current pairs are:  A7, C7, D7, S7  DJ, SJ, CJ, AJ  DA, CA, SA, AA  D5, C5, A5, S5  D9, A9, C9, S9  D4, S4, C4, A4  S2, D2, C2, A2  AK, SK, CK, DK  C3, A3, S3, D3  AT, CT, DT, ST  C6, A6, D6, S6  CQ, SQ, AQ, DQ  S8, A8, C8, D8  Your hand is empty.  Finished with the whole deck. |