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| **Lab Exercise 3 – August 2021** | | | | | | | |  | |
| Programme | | : | BTech | Semester | : | FS 2021-22 | | | |
| Course Title | | : | Foundations of Data Analytics | Code | : | 3505 | | | |
| Class Nbr(s) | : | CH2020211001158 | | | |
| Faculty(s) | | : | Dr. B. Radhika Selvamani | Slot |  | L33+L34 | | | |
| Date | | : | 16/8/2021 |  |  |  | | | |
| **Data Frames and Data Tables in R**  **Question A** | | | | | | | | |  |
| **Q.No.** | **Question Description** | | | | | | **Marks** | | | |  |
|  | **Find attached the poker hand details of a card game in the attached csv file.**  **It has 11 columns.**  **The attribute details are given below.**  **Read this .csv file as a data frame.**  **Attribute Information:**  1) S1 "Suit of card #1" Ordinal (1-4) representing {Hearts, Spades, Diamonds, Clubs}  2) C1 "Rank of card #1" Numerical (1-13) representing (Ace, 2, 3, ... , Queen, King)  3) S2 "Suit of card #2" Ordinal (1-4) representing {Hearts, Spades, Diamonds, Clubs}  4) C2 "Rank of card #2" Numerical (1-13) representing (Ace, 2, 3, ... , Queen, King)  5) S3 "Suit of card #3" Ordinal (1-4) representing {Hearts, Spades, Diamonds, Clubs}  6) C3 "Rank of card #3" Numerical (1-13) representing (Ace, 2, 3, ... , Queen, King)  7) S4 "Suit of card #4" Ordinal (1-4) representing {Hearts, Spades, Diamonds, Clubs}  8) C4 "Rank of card #4" Numerical (1-13) representing (Ace, 2, 3, ... , Queen, King)  9) S5 "Suit of card #5" Ordinal (1-4) representing {Hearts, Spades, Diamonds, Clubs}  10) C5 "Rank of card 5" Numerical (1-13) representing (Ace, 2, 3, ... , Queen, King)  11) CLASS "Poker Hand" Ordinal (0-9)  0: Nothing in hand; not a recognized poker hand 1: One pair; one pair of equal ranks within five cards 2: Two pairs; two pairs of equal ranks within five cards 3: Three of a kind; three equal ranks within five cards 4: Straight; five cards, sequentially ranked with no gaps 5: Flush; five cards with the same suit 6: Full house; pair + different rank three of a kind 7: Four of a kind; four equal ranks within five cards 8: Straight flush; straight + flush 9: Royal flush; {Ace, King, Queen, Jack, Ten} + flush | | | | | |  | | | |  |
| a | Create a new data frame from the given .csv file where the 1st, 3rd, 5th , 7th ang 9th columns are factors with the levels “Heart, Spade, Diamond, Club” for values {1,2,3,4} Display the data frame. | | | | | |  | | | |  |
| b | Convert the last column into a factor where the numbers are labelled as below  0: **Nothing in hand**; not a recognized poker hand 1: **One pair**; one pair of equal ranks within five cards 2: **Two pairs**; two pairs of equal ranks within five cards 3: **Three of a kind**; three equal ranks within five cards 4: **Straight; five cards**, sequentially ranked with no gaps 5: **Flush**; five cards with the same suit 6: **Full house**; pair + different rank three of a kind 7: **Four of a kind**; four equal ranks within five cards 8: **Straight flush**; straight + flush 9: **Royal flush**; {Ace, King, Queen, Jack, Ten} + flush  Display the data frame | | | | | |  | | | |  |
| c | Display all the Three of a kind cards. | | | | | |  | | | |  |
| d. | Display all cards which are “Nothing in Hand” or One Pair or Two Pairs | | | | | |  | | | |  |