Sardar Vallabhbhai National Institute of Technology
Surat-395007

Web Programming and Python (AI104)

Assignment – 11

1. Write a Pandas program to create
   a) Date time object for Jan 15 2012.
   b) Specific date and time of 9:20 pm.
   c) Local date and time.
   d) A date without time.
   e) Current date.
   t) Time from a date time.
   g) Current local time.

2. Write a Pandas program to convert all the string values to upper, lower cases in a given pandas series. Also find the length of the string values.

   s = pd.Series (['X', 'Y', 'T', 'Aaba', 'Baca', 'CABA', None, 'bird', 'horse', 'dog'])

3. After accidentally leaving an ice chest of fish and shrimp in your car for a week while you were on vacation, you're now in the market for a new vehicle. Your insurance didn't cover the loss, so you want to make sure you get a good deal on your new car.

   Given a Series of car asking_prices and another Series of car fair_prices, determine which cars for sale are a good deal. In other words, identify cars whose asking price is less than their fair price.
   The result should be a **list of integer indices** corresponding to the good deals in asking_prices.

4. Whenever your friends John and Judy visit you together, y'all have a party. Given a DataFrame with 10 rows representing the next 10 days of your schedule and whether John and Judy are scheduled to make an appearance, insert a new column called days_til_party that indicates how many days until the next party.

   days_til_party should be 0 on days when a party occurs, 1 on days when a party doesn't occur but will occur the next day, etc.

5. Given a dataset of concerts, count the number of concerts per (artist, venue), per year month. Make the resulting table be a *wide* table - one row per year month with a column for each unique (artist, venue) pair. Use the cross product of the artists and venues Series to determine which (artist, venue) pairs to include in the result.