```
In [1]: import pandas as pd
         \textbf{import} \ \texttt{matplotlib.pyplot} \ \textbf{as} \ \texttt{plt}
         from astropy.stats.circstats import circmean
         from functools import reduce
         import datetime
         import pickle
         import time
         import plotly.express as px
         import numpy as np
         import sqlite3
         pd.set_option("display.precision", 2)
plt.rcParams.update({'font.size': 20, 'figure.figsize': (8, 4)})
         %matplotlib inline
         import matplotlib inline
         matplotlib_inline.backend_inline.set_matplotlib_formats('svg')
         import seaborn as sns
         sns.set()
         import warnings
         warnings.filterwarnings('ignore')
In [2]: connector = sqlite3.connect("../Extras/graphs data.db")
         cursor = connector.cursor()
```

Heart Rate graphs printer

```
In [37]:
    cursor.execute("SELECT * FROM heartrate_graphs_data WHERE id=209")
    rows = cursor.fetchall()
    for row in rows:
        #getting heartrate samples from dataframe
            heartrate_samples_dict = pickle.loads(row[3])
            heartrate_dict_keys = list(heartrate_samples_dict.keys())
            heartrate_dict_values = list(heartrate_samples_dict.values())
            heartrate_samples_df = pd.DataFrame({'time':heartrate_dict_keys, 'heartrate':heartrate_dict_values})
            #preparing plot title name
            plot_title_name = 'user ID: '+str(row[0])+' Date: '+str(row[1])+' Type: '+str(row[2])
            #creating lineplot
            sns.lineplot(x='time', y='heartrate', data=heartrate_samples_df, color='red')
            plt.title(plot_title_name)
            plt.show()
```





















































































































