



MOTEL
MATE

OUR TEAM



จรินธร กันกจันทร์
650510695



จิติชญาณ สุเมธาลังการ
650510701



ภาณุกิต ศิริกุล
650510714



กลลภा อินตาดวงศ์
650510724



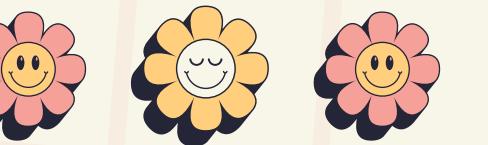
เลิฟธนันท์ นาุมั่งวงศ์
650510738

ເບີຍ

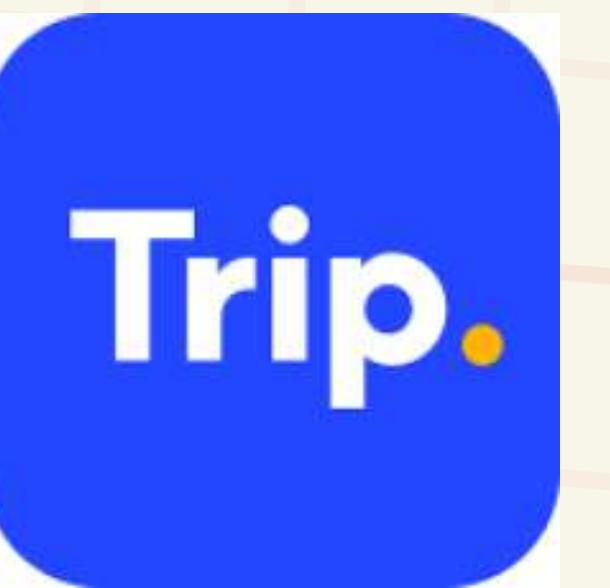
PROBLEM



ໃນປັຈຈຸບັນ ແກຄໂນໂລຢືສາຣສູນເກສມືບກາທສໍາຄັງ
ໂດຍແຂພາຍອຍ່າງຍິ່ງໃນດໍານາກາຮ່ວມມືກ່ອງເກີຍວແລະກາຮເດີນກາງ
ຜູ້ຄົນມາກມາຍຕ່າງພື້ນພາກາຮຄໍ້ນຫາຂໍ້ອມູລກື້ພັກແລະໂຮງແຮມ
ຜ່ານແພລັກໂຮມອອນໄລ້ນີ້ເພື່ອຕັດສິນໃຈໃນກາຮເລືອກກື້ພັກ
ກາຮກື້ຜູ້ໃຊ້ຄໍ້ນຫາໂຮງແຮມບັນແພລັກໂຮມອອນໄລ້ນີ້ ອາຈໃຊ້
ເວລາແລະຄວາມພຍາຍາມໃນກາຮເລືອກໂຮງແຮມກື້ເໝາະສົມຈາກ
ຮີວິວຈຳນວນນັກ



EXAMPLE



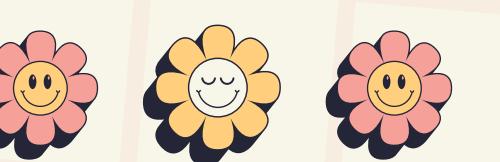
ຂໍ້ຕົວ

OBJECTIVE



การพัฒนาแอปพลิเคชันที่สามารถแนะนำที่พักและ
โรงแรมจากความคิดเห็นของผู้เข้าพักจริง จึงมีความสำคัญ
อย่างยิ่งในการช่วยเพิ่มประสิทธิภาพในการเดินทางให้ดียิ่งขึ้น

โครงการนี้มีจุดมุ่งหมายเพื่อพัฒนาระบบแนะนำ
โรงแรมที่สามารถให้คำแนะนำโรงแรมที่ตรงกับความ
ต้องการของผู้ใช้ได้อย่างรวดเร็วและแม่นยำ โดยใช้เทคโนโลยี
การจัดการและวิเคราะห์ข้อมูลขนาดใหญ่ เพื่อให้ผู้ใช้
สามารถเลือกโรงแรมที่ตรงกับความต้องการเฉพาะ



DATASET

The screenshot shows a DataCamp notebook interface. At the top, it says "DATAFINITI AND 1 COLLABORATOR - UPDATED 5 YEARS AGO". Below that, there are buttons for "203" (with an up arrow), "New Notebook", and "Download (14 ...)". To the right of the notebook is a decorative yellow flower icon with a smiling face. The main title of the notebook is "Hotel Reviews", with a subtitle "A list of 1,000 hotels and their online reviews." Below the title is a small image of a hotel sign that says "OTEL". The central content area contains a large yellow box with the following text in Thai:

ชุดข้อมูล Datafiniti Hotel Reviews
Dataset เป็นชุดข้อมูลกีร์วบรวมรีวิวจาก
โรงแรมในหลายรัฐของสหรัฐอเมริกา ชุดข้อมูล
นี้ประกอบด้วยรายละเอียดโรงแรม การให้
คะแนน และข้อความรีวิวที่สะท้อนประสบการณ์
ของผู้เข้าพักจริง ทำให้แอปพลิเคชันสามารถ
แนะนำที่พักที่ตูร งกับความต้องการของผู้ใช้ได้
อย่างแม่นยำ ก็ในเรื่องกำลัง ความสะอาด
บริการ และสิ่งอำนวยความสะดวก

1ST DATASET

| A | B | C | D | E | F | G | H | I | J |
|---------|------------|------|---------|----------|-----------|------|------------|----------|-------------|
| address | categories | city | country | latitude | longitude | name | postalCode | province | reviews.dat |

| K | L | M | N | O | P | Q | R | S | T |
|-------------|-------------|------------|----------------|--------------|---------------|--------------|--------------|----------------------|---|
| reviews.dat | reviews.dat | reviews.id | reviews.rating | reviews.text | reviews.title | reviews.user | reviews.user | reviews.userProvince | |

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|----|--------------------|------------|------|----------|----------|------------|-------|------------|------------|----------------------|-------------|------------|----------------|--------------|---------------|----------------|---------------------------------------|------------------------------------|---|
| 1 | address | categories | city | country | latitude | longitude | name | postalCode | province | reviews.dat | reviews.dat | reviews.id | reviews.rating | reviews.text | reviews.title | reviews.user | reviews.user | reviews.userProvince | |
| 2 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2013-09-22 | 2016-10-24T00:00:25Z | | | | | | 4 Pleasant | 10 Good location away fro Russ (kent) | | |
| 3 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-03 | 2016-10-24T00:00:25Z | | | | | | 5 Really lovel | Great hotel with Jacuzz | A Traveler | |
| 4 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2014-05-13 | 2016-10-24T00:00:25Z | | | | | | 5 Ett mycket | Lugnt li | 1/2 ge | |
| 5 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2013-10-27 | 2016-10-24T00:00:25Z | | | | | | 5 We stayed | I Good location on the Li | Julie | |
| 6 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-03-05 | 2016-10-24T00:00:25Z | | | | | | 5 We stayed | li | 1/2 i | |
| 7 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-05 | 2016-10-24T00:00:25Z | | | | | | 5 We loved st | Very nice hotel | A Traveler | |
| 8 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2014-06-10 | 2016-10-24T00:00:25Z | | | | | | 4 Lovely view | Lovely view out onto the | A Traveler | |
| 9 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-05-14 | 2016-10-24T00:00:25Z | | | | | | 4 ottimo sog | Lovely view out onto the | A Traveler | |
| 10 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-09-14 | 2016-10-24T00:00:25Z | | | | | | 3 Gnstiger Au | Gü | 1/2 i | |
| 11 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-05-16 | 2016-10-24T00:00:25Z | | | | | | 4 Lidoen er p | Ro og hygge | A Traveler | |
| 12 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-30 | 2016-10-24T00:00:25Z | | | | | | 4 Accueil cha | Trü | 1/2 s bon hü | |
| 13 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-08-02 | 2016-10-24T00:00:25Z | | | | | | 3 It was ok | hc It was ok | hotel is nice fr ahsas | |
| 14 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2016-05-24 | 2016-10-24T00:00:25Z | | | | | | 4 Klasse Frhs | Sehr angenehmes Hote | ahsas | |
| 15 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2016-06-07 | 2016-10-24T00:00:25Z | | | | | | 4 Bardzo sym | Tip top | A Traveler | |
| 16 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-09-09 | 2016-10-24T00:00:25Z | | | | | | 4 Bra o lugnt | Lugnet pü | 1/2 Lido | |
| 17 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2014-04-01 | 2016-10-24T00:00:25Z | | | | | | 4 The hotel st | Lugnet pü | 1/2 Lido | |
| 18 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-06-05 | 2016-10-24T00:00:25Z | | | | | | 4 Nice hotel , | Nice hotel with very frie | Mrs Gardner | |
| 19 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-01 | 2016-10-24T00:00:25Z | | | | | | 4 Wir hatten | I Guter Ausgangspunkt | A Traveler | |
| 20 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-08-12 | 2016-10-24T00:00:25Z | | | | | | 4 ... | i | 1/2 1/2 1/2 1/2 1/2 1/2 A Traveler | |
| 21 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2014-05-23 | 2016-10-24T00:00:25Z | | | | | | 1 Hotelliuhor | Hotelliuhone oli pettyn | A Traveler | |
| 22 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-07-02 | 2016-10-24T00:00:25Z | | | | | | 1 DONT stay | Dungeons, Drain Flies | A Traveler | |
| 23 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-11 | 2016-10-24T00:00:25Z | | | | | | 5 We had abs | Excellent hotel with go | Simon | |
| 24 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-06 | 2016-10-24T00:00:25Z | | | | | | 4 Wir buchtein | Schü | 1/2 ne Lage, ruh | |
| 25 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-07-14 | 2016-10-24T00:00:25Z | | | | | | 5 Lovely hote | Lovely stay - second tin | Martyn | |
| 26 | Riviera San Hotels | Mableton | US | 45.42161 | 12.37619 | Hotel Russ | 30126 | GA | 2015-04-20 | 2016-10-24T00:00:25Z | | | | | | 5 Das Hotel li | Tolles Hotel fi | 1/2 r ei Ji | |

20 Columns | 35,912 Rows

2ND DATASET

| A | B | C | D | E | F | G | H | I | J | K | L | M | |
|----|------------|------------|------------|---|------------|--------------|----------|----------|---------------|-----------|------------|------------|---|
| id | dateAdded | dateUpdate | address | categories | primaryCat | city | country | keys | latitude | longitude | name | postalCode | |
| 1 | AVwc252W | 2016-10-30 | 2018-09-10 | 5921 Valen Hotels,Hot Accommmod Rancho Sar | US | us/ca/ranch | 32.99096 | -117.186 | Rancho Val | 92067 CA | 2013-11-14 | 2016-08-03 | 5 https://www Our experie Best romantic vacation ever!!!! |
| 2 | AVwc252W | 2016-10-30 | 2018-09-10 | 5921 Valen Hotels,Hot Accommmod Rancho Sar | US | us/ca/ranch | 32.99096 | -117.186 | Rancho Val | 92067 CA | 2014-07-06 | 2016-08-02 | 5 https://www Amazing pl Sweet sweet serenity |
| 3 | AVwc252W | 2016-10-30 | 2018-09-10 | 5921 Valen Hotels,Hot Accommmod Rancho Sar | US | us/ca/ranch | 32.99096 | -117.186 | Rancho Val | 92067 CA | 2015-01-02 | 2016-11-15 | 5 https://www We booked Amazing Property and Experience |
| 4 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-05-15 | 2016-05-21 | 2 https://www Currently in Never again Richmond VA |
| 5 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-07-05 | 2016-07-31 | 5 https://www I live in Md & ALWAYS GF Laurel MD |
| 6 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-06-11 | 2016-07-31 | 5 https://www I stayed her Wonderful : Laurel MD |
| 7 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-04-30 | 2016-05-05 | 5 https://www Beautiful ro Worth the money |
| 8 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-06-24 | 2016-07-17 | 5 https://www We stayed f Great Hotel Clayton NC |
| 9 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-05-25 | 2016-07-31 | 5 https://www I travel a lot Short stay f Boston MA |
| 10 | AVwdOclqlI | 2015-11-28 | 2018-09-10 | 7520 Teagu Hotels,Hot Accommmod Hanover | US | us/md/hanov | 39.15593 | -76.7163 | Aloft Arundel | 21076 MD | 2016-01-26 | 2016-04-19 | 5 https://www In my line o Amazing er Portland |
| 11 | AVwePiAX_ | 2016-03-23 | 2018-09-10 | 315 SE Olyr Hotels,Hot Accommmod Vancouver | US | us/wa/vanc | 45.61921 | -122.525 | Hampton Ir | 98684 WA | 2016-05-03 | 2016-05-13 | 5 https://www The staff is l loved our stay here |
| 12 | AVwePiAX_ | 2016-03-23 | 2018-09-10 | 315 SE Olyr Hotels,Hot Accommmod Vancouver | US | us/wa/vanc | 45.61921 | -122.525 | Hampton Ir | 98684 WA | 2016-01-30 | 2016-04-19 | 5 https://www Very friendl Hampton Ir Antioch |
| 13 | AVwePiAX_ | 2016-03-23 | 2018-09-10 | 315 SE Olyr Hotels,Hot Accommmod Vancouver | US | us/wa/vanc | 45.61921 | -122.525 | Hampton Ir | 98684 WA | 2016-03-11 | 2016-03-20 | 5 http://www Upon arrivir Perfection Portland |
| 14 | AVwePiAX_ | 2016-03-23 | 2018-09-10 | 315 SE Olyr Hotels,Hot Accommmod Vancouver | US | us/wa/vanc | 45.61921 | -122.525 | Hampton Ir | 98684 WA | 2016-06-21 | 2016-07-28 | 5 https://www This is a nic Good hotel Port Orchar WA |
| 15 | AVwePiAX_ | 2016-03-23 | 2018-09-10 | 315 SE Olyr Hotels,Hot Accommmod Vancouver | US | us/wa/vanc | 45.61921 | -122.525 | Hampton Ir | 98684 WA | 2016-06-21 | 2016-07-28 | 5 https://www Beautiful pr Excellent! San Diego CA |
| 16 | AVwePiAX_ | 2016-03-23 | 2018-09-10 | 315 SE Olyr Hotels,Hot Accommmod Vancouver | US | us/wa/vanc | 45.61921 | -122.525 | Hampton Ir | 98684 WA | 2015-09-14 | 2016-03-29 | 4 http://www Old hotel w Very pleased |
| 17 | AVwdUKE3 | 2016-11-06 | 2018-09-10 | 106 W 12th Hotels,Cat Accommmod Kansas City | US | us/mo/kans | 39.10012 | -94.5847 | Hotel Phillip | 64105 MO | 2015-11-26 | 2016-03-29 | 5 http://www Very comfo Excellent Stay |
| 18 | AVwdUKE3 | 2016-11-06 | 2018-09-10 | 106 W 12th Hotels,Cat Accommmod Kansas City | US | us/mo/kans | 39.10012 | -94.5847 | Hotel Phillip | 64105 MO | 2016-01-30 | 2016-03-29 | 3 http://www Stayed here Beautiful lobby but rooms need hel Yamachase |
| 19 | AVwdUKE3 | 2016-11-06 | 2018-09-10 | 106 W 12th Hotels,Cat Accommmod Kansas City | US | us/mo/kans | 39.10012 | -94.5847 | Hotel Phillip | 64105 MO | 2015-12-13 | 2016-03-29 | 5 http://www My husband Hotel's 192 Wichita KS |
| 20 | AVwdUKE3 | 2016-11-06 | 2018-09-10 | 106 W 12th Hotels,Cat Accommmod Kansas City | US | us/mo/kans | 39.10012 | -94.5847 | Hotel Phillip | 64105 MO | 2015-09-07 | 2016-03-29 | 4 http://www Just stayed Excellent st Chicago IL |
| 21 | AVwdUKE3 | 2016-11-06 | 2018-09-10 | 106 W 12th Hotels,Cat Accommmod Kansas City | US | us/mo/kans | 39.10012 | -94.5847 | Hotel Phillip | 64105 MO | 2015-11-26 | 2016-03-29 | 5 https://www Everything v Thank you, Istanbul |
| 22 | AVweQyWN | 2016-05-21 | 2018-09-10 | 10611 Stan Bed Breakfa Accommmod Huntingdon | US | us/pa/hunti | 40.52748 | -77.9698 | The Inn at S | 16652 PA | 2015-05-03 | 2016-05-05 | 5 https://www I work here Extended st Columbus GA |
| 23 | AVweQDZpI | 2016-05-05 | 2018-09-10 | 102 Valley Hotels,Cor Accommmod Perry | US | us/ga/perry | 32.47188 | -83.7452 | Econolodge | 31069 GA | 2016-02-08 | 2016-05-04 | 5 https://www I work here Extended st Columbus GA |
| 24 | AVwdQ0dy | 2016-11-03 | 2018-09-10 | 12 4th St Hotels,Res Accommmod San Francis | US | us/ca/sanfr | 37.78521 | -122.406 | Hotel Zelos | 94103 CA | 2016-05-02 | 2016-11-02 | 5 https://www The hotel is Convenient, cute and moderately c C |
| 25 | AVwdQ0dy | 2016-11-03 | 2018-09-10 | 12 4th St Hotels,Res Accommmod San Francis | US | us/ca/sanfr | 37.78521 | -122.406 | Hotel Zelos | 94103 CA | 2016-05-13 | 2016-11-02 | 4 https://www excellent lo Perfectly fine hotel for a visit to SF |
| 26 | AVwdQ0dy | 2016-11-03 | 2018-09-10 | 12 4th St Hotels,Res Accommmod San Francis | US | us/ca/sanfr | 37.78521 | -122.406 | Hotel Zelos | 94103 CA | 2016-07-07 | 2016-11-02 | 5 https://www Hotel Zelos Great Staff! |
| 27 | AVwdQ0dy | 2016-11-03 | 2018-09-10 | 12 4th St Hotels,Res Accommmod San Francis | US | us/ca/sanfr | 37.78521 | -122.406 | Hotel Zelos | 94103 CA | 2016-10-06 | 2016-10-15 | 3 https://www Pros: the lo Not so gooc Hong Kong |
| 28 | AVwdKLPU | 2016-03-23 | 2018-09-10 | 998 W Lanc Hotels and Accommmod Vineland | US | us/nj/vinela | 39.48745 | -75.0445 | EconoLodg | 8360 NJ | 2012-08-30 | 2016-03-18 | 1 http://www After getting DO NOT stay here!!!!!!!!!!!!!! |
| 29 | AVwdKLPU | 2016-03-23 | 2018-09-10 | 998 W Lanc Hotels and Accommmod Vineland | US | us/nj/vinela | 39.48745 | -75.0445 | EconoLodg | 8360 NJ | 2012-07-17 | 2016-03-18 | 1 http://www We had no (Filthy hotel Vineland |
| 30 | AWE7dKHF | 2018-01-28 | 2018-09-10 | 250 Waterfi Hotels,Cor Accommmod Oxon Hill | US | us/md/oxor | 38.78213 | -77.015 | Hampton Ir | 20745 MD | 2018-01-05 | 2018-03-06 | 4 http://www Hotel is in t THE DC TRIP |
| 31 | AWE7dKHF | 2018-01-28 | 2018-09-10 | 250 Waterfi Hotels,Cor Accommmod Oxon Hill | US | us/md/oxor | 38.78213 | -77.015 | Hampton Ir | 20745 MD | 2014-08-25 | 2018-03-10 | 5 http://www Excellent e Nice location |
| 32 | AWE7dKHF | 2018-01-28 | 2018-09-10 | 250 Waterfi Hotels,Cor Accommmod Oxon Hill | US | us/md/oxor | 38.78213 | -77.015 | Hampton Ir | 20745 MD | 2009-01-07 | 2018-03-10 | 2 http://www heat in roor Hampton Inn |

25 Columns | 10,000 Rows

3RD DATASET

| 1 | A | B | C | D | E | F | G | H | I | J | K | L | M | |
|----|-----------|-------------|-------------|---|-------------|-------------|-------------|--------------|-------------|------------|--------------------------------|--|------------------------------------|-----------------------------------|
| | id | dateAdded | dateUpdate | address | categories | primaryCat | city | country | keys | latitude | longitude | name | postalCode | |
| | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | |
| | province | reviews.dat | reviews.dat | reviews.dat | reviews.rat | reviews.sol | reviews.tex | reviews.titl | reviews.us | reviews.us | reviews.us | sourceURL | websites | |
| 1 | A | B | C | D | E | F | G | H | I | J | K | L | M | |
| 2 | AWE2FvX5 | 2018-01-11 | 2019-05-21 | 5620 Calle Hotels, Hot Accommoc Goleta | US | us/ca/golet | 34.44178 | -119.82 | Best Weste | 93117 CA | 2018-01-01T00:00:00.180Z | 3 https://www This hotel v Best Weste San Jose | UnitedStat | tatsurok20 https://ww |
| 3 | AVwcj_Ohk | 2016-11-01 | 2019-05-21 | 5th And Sai Hotels, Lod Accommoc Carmel by US | US | us/ca/carm | 36.55722 | -121.922 | Best Weste | 93921 CA | 2016-04-02T00:00:00.2016-10-09 | 4 https://www We stayed i Clean roon San Francis CA | STEPHEN N | http://www http://ww |
| 4 | AVwcj_Ohk | 2016-11-01 | 2019-05-21 | 5th And Sai Hotels, Lod Accommoc Carmel by US | US | us/ca/carm | 36.55722 | -121.922 | Best Weste | 93921 CA | 2016-01-06T00:00:00.2016-10-09 | 3 https://www Parking was Business | Prescott Va | AZ 15Deborah http://www http://ww |
| 5 | AVwcj_Ohk | 2016-11-01 | 2019-05-21 | 5th And Sai Hotels, Lod Accommoc Carmel by US | US | us/ca/carm | 36.55722 | -121.922 | Best Weste | 93921 CA | 2016-08-22T00:00:00.2016-10-31 | 5 https://www Not cheap Very good | Guaynabo PR | Wilfredo M http://www http://ww |
| 6 | AVwcj_Ohk | 2016-11-01 | 2019-05-21 | 5th And Sai Hotels, Lod Accommoc Carmel by US | US | us/ca/carm | 36.55722 | -121.922 | Best Weste | 93921 CA | 2016-03-21T00:00:00.2016-10-09 | 2 https://www If you get th Low chanc Reno | NV | Luc D http://www http://ww |
| 7 | AVweLARAI | 2016-05-11 | 2019-05-21 | 167 W Mair Hotels, Hot Accommoc Lexington | US | us/ky/lexin | 38.04701 | -84.4977 | 21c Museu | 40507 KY | 2016-03-15T00:00:00.2016-03-19 | 4 http://www This is such Loved stay Nashville | TN | LKDIsenz https://ww http://ww |
| 8 | AVweLARAI | 2016-05-11 | 2019-05-21 | 167 W Mair Hotels, Hot Accommoc Lexington | US | us/ky/lexin | 38.04701 | -84.4977 | 21c Museu | 40507 KY | 2016-04-18T00:00:00.2016-05-10 | 1 https://www We recently Does not liv Charlotte | NC | GGTravels2 https://ww http://ww |
| 9 | AV1thAoL3 | 2017-07-21 | 2019-05-21 | 115 W Stev Hotels and Accommoc Russell Spr | US | us/ky/russe | 37.0653 | -85.0736 | Spring Mo | 42642 KY | 2015-08-13T00:00:00.2017-12-17 | 1 https://www I reserved a worst custc Hanceville Alabama | madaramaj https://ww http://ww | |
| 10 | AVz6h4Sb3 | 2017-06-31 | 2019-05-21 | 2240 Buen Budget Hot Accommoc Lexington | US | us/ky/lexin | 38.0421 | -84.4271 | Microtel In | 40505 KY | 2017-06-15T00:00:00.2017-06-26 | 5 https://www MoreMore Location L Jeffersonvil Indiana | IUMIKECO https://ww https://ww | |
| 11 | AVwdo6WF | 2016-11-01 | 2019-05-21 | 1107 N Mai Hotels, Bed Accommoc Hopkinsvill | US | us/ky/hopk | 36.889 | -87.4813 | American Ir | 42240 KY | 2014-07-15T00:00:00.2016-03-19 | 1 https://www Hello, I hav The worst p Lawton | OK | johnnytuba http://www http://ww |
| 12 | AVwcuoOel | 2016-03-21 | 2019-05-21 | 1953 Nichc Hotels, Hot Accommoc Lexington | US | us/ky/lexin | 38.01243 | -84.5164 | Hampton Ir | 40503 KY | 2016-07-06T00:00:00.2016-07-18 | 5 https://www This is a ne Beautiful h Williamsbu VA | colonialgal https://ww https://ad. | |
| 13 | AWB2mcq/ | 2017-12-21 | 2019-05-21 | 4200 Via R Hotels, Lod Accommoc Carpenteria | US | us/ca/carp | 34.40507 | -119.531 | Motel 6 Sar | 93013 CA | 2017-11-11T00:00:00.2018-01-01 | 3 https://www I stayed hei Good for lo London | UnitedKing Jonathan C | http://www https://ww |
| 14 | AVwdhvN2 | 2017-01-11 | 2019-05-21 | 1818 El Ca Hotels, Hot Accommoc Redwood C | US | us/ca/redw | 37.4777 | -122.225 | Comfort In | 94063 CA | 2016-04-20T00:00:00.2016-05-11 | 5 https://www Completely Under cons Los Angeles CA | Kristen Y | http://tripa https://ww |
| 15 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-06-29T00:00:00.2018-11-06 | 3 https://ww The water is Very hot wa Honolulu Hawaii | Stacy D | https://ww http://ww |
| 16 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2018-09-05T00:00:00.2018-11-06 | 5 https://ww Great staff :Excellent h New York C NewYork | brand0nst https://ww http://ww | |
| 17 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2016-11-07T00:00:00.2018-11-06 | 2 https://ww This Hotel, Historic bu Arlington Texas | RobertKest https://ww http://ww | |
| 18 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2016-07-02T00:00:00.2018-11-06 | 4 https://ww Very accom Accomatio Des Moines Washington dorp638 | https://ww http://ww | |
| 19 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2017-10-03T00:00:00.2018-11-06 | 4 https://ww Room was i Great Roon Philadelphia Pennsylvar B1962UTvi | https://ww http://ww | |
| 20 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-10-13T00:00:00.2018-11-06 | 3 https://ww The Whitne Good locat Abergaven UnitedKing kenthecelt | https://ww http://ww | |
| 21 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2016-06-08T00:00:00.2018-08-26 | 4 https://ww This is an ol Great value Cayey PuertoRico josec2016 | https://ww http://ww | |
| 22 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-05-04T00:00:00.2018-11-06 | 5 https://ww The hotel is Excellent Palms Wes Florida | 396kathyg https://ww http://ww | |
| 23 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2016-06-18T00:00:00.2018-11-06 | 4 https://ww This hotel a Good Hote San Francis California | Alamo77 https://ww http://ww | |
| 24 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2016-10-30T00:00:00.2018-11-06 | 5 https://ww Such a bea Beautiful H North Kans Missouri | jrvcrj https://ww http://ww | |
| 25 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-01-09T00:00:00.2018-08-26 | 4 https://ww We recently Very nice ai Cumming Georgia | ophiacus46 https://ww http://ww | |
| 26 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-12-22T00:00:00.2018-11-06 | 5 https://ww Our room w Great hotel Houston Texas | Cindy P https://ww http://ww | |
| 27 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-05-14T00:00:00.2018-11-06 | 4 https://ww Excellent s Whitney New York C NewYork | jovinhome https://ww http://ww | |
| 28 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2016-10-31T00:00:00.2018-11-06 | 1 https://ww I will never Horrible, cl New Orlear Louisiana | mattPC371 https://ww http://ww | |
| 29 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2015-09-21T00:00:00.2018-11-06 | 2 https://ww The hotel w Second ch Houston Texas | cseibert91 https://ww http://ww | |
| 30 | AWV8VsCtI | 2018-08-21 | 2019-05-21 | 610 Poydra Building, Hc Accommoc New Orlear | US | us/la/newo | 29.94913 | -90.0697 | The Whitne | 70130 LA | 2017-12-17T00:00:00.2018-11-06 | 2 https://ww Nice locati Non recom Hossegor France | G2744BFja https://ww http://ww | |

26 Columns | 10,000 Rows



APP DEVELOPMENT

Step 1 : Import Libraries AND Load Data

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
from wordcloud import WordCloud, STOPWORDS
import nltk
from nltk.corpus import stopwords
from nltk.stem import WordNetLemmatizer
from nltk.tokenize import word_tokenize
from sklearn.feature_extraction.text import TfidfVectorizer
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, classification_report, confusion_matrix

nltk.download('punkt')
nltk.download('stopwords')
nltk.download('wordnet')
```

```
df1 = pd.read_csv('/content/drive/MyDrive/Data Engineering/Hotel_Reviews.csv')
df2 = pd.read_csv('/content/drive/MyDrive/Data Engineering/Datafiniti_Hotel_Reviews.csv')
df3 = pd.read_csv('/content/drive/MyDrive/Data Engineering/Datafiniti_Hotel_Reviews_Jun19.csv')
```

APP DEVELOPMENT

Step 2 : Data Transformation

```
# Drop Columns
df1 = df1.drop(['address', 'latitude', 'longitude', 'reviews.userCity', 'reviews.username',
                 'reviews.userProvince', 'reviews.doRecommend', 'reviews.id', 'postalCode'], axis=1)

# Transformation: Date
df1['reviews.date'] = pd.to_datetime(df1['reviews.date'], utc=True)
df1['reviews.dateAdded'] = pd.to_datetime(df1['reviews.dateAdded'], utc=True)
df1['reviews.date'] = df1['reviews.date'].dt.date
df1['reviews.dateAdded'] = df1['reviews.dateAdded'].dt.date

# Sort by Review Date
df1 = df1.sort_values(by='reviews.date', ascending=True)

# Drop Columns
df2 = df2.drop(['id', 'dateUpdated', 'address', 'primaryCategories', 'keys', 'latitude', 'longitude',
                 'postalCode', 'reviews.dateSeen', 'reviews.sourceURLs', 'reviews.userCity',
                 'reviews.userProvince', 'reviews.username', 'sourceURLs', 'websites'], axis=1)

# Sort Columns by df1
df2 = df2.rename(columns={'dateAdded': 'reviews.dateAdded'})
new_order = ['categories', 'city', 'country', 'name', 'province', 'reviews.date',
             'reviews.dateAdded', 'reviews.rating', 'reviews.text', 'reviews.title']
df2 = df2[new_order]

# Transformation: Date
df2['reviews.dateAdded'] = pd.to_datetime(df2['reviews.dateAdded'], utc=True)
df2['reviews.dateAdded'] = df2['reviews.dateAdded'].dt.date
df2['reviews.date'] = df2['reviews.date'].str.split('T').str[0]
# Sort the DataFrame by 'reviews.date' in ascending order
df2 = df2.sort_values(by='reviews.date', ascending=True)
```



APP DEVELOPMENT

Step 2 : Data Transformation

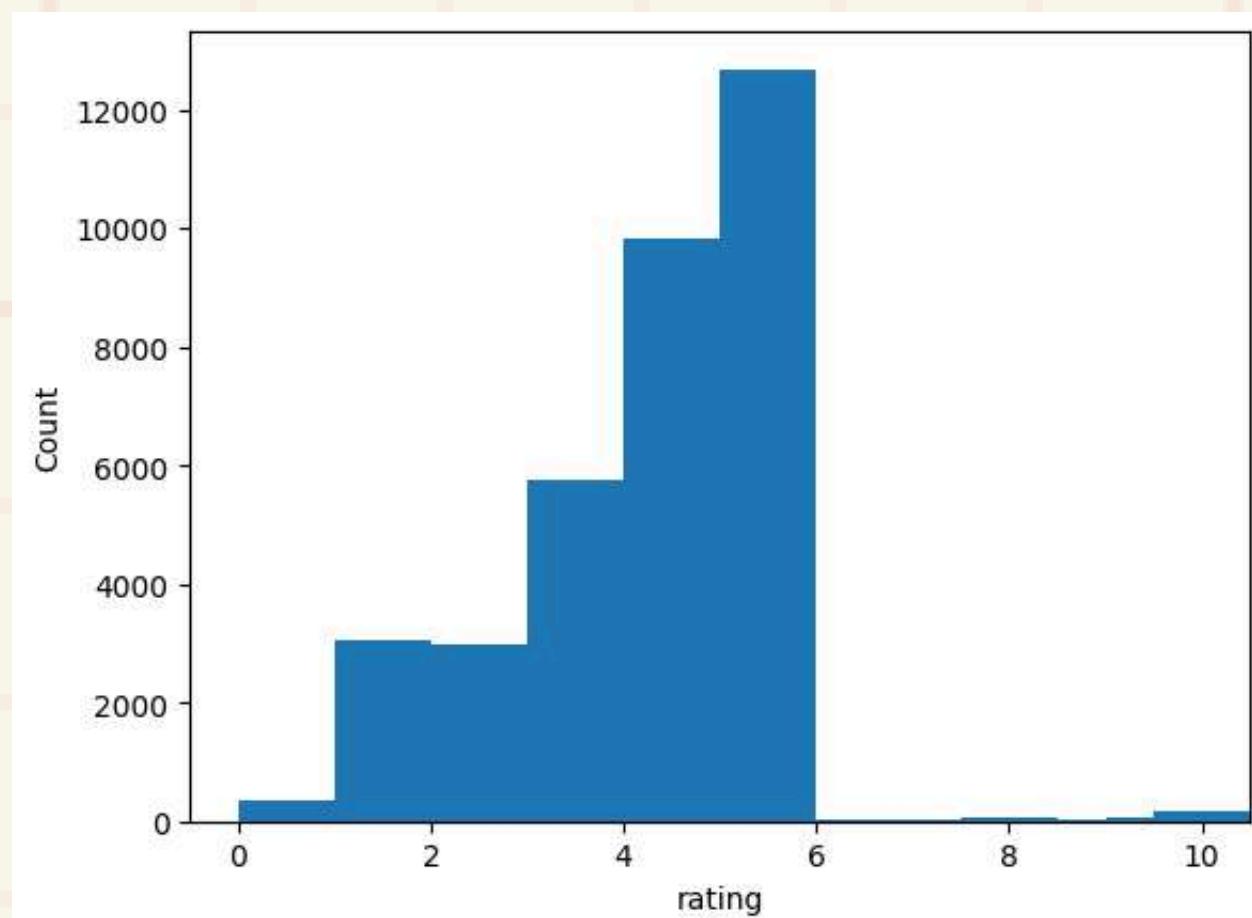
```
# Drop Columns
df3 = df3.drop(['id', 'dateUpdated', 'address', 'primaryCategories', 'keys', 'latitude', 'longitude',
                 'postalCode', 'reviews.dateSeen', 'reviews.sourceURLs', 'reviews.userCity',
                 'reviews.userProvince', 'reviews.username', 'sourceURLs', 'websites', 'reviews.dateAdded'], axis=1)
# Sort Columns by df1
df3 = df3.rename(columns={'dateAdded': 'reviews.dateAdded'})
new_order = ['categories', 'city', 'country', 'name', 'province', 'reviews.date',
             'reviews.dateAdded', 'reviews.rating', 'reviews.text', 'reviews.title']
df3 = df3[new_order]
# Transformation: Date
df3['reviews.dateAdded'] = pd.to_datetime(df3['reviews.dateAdded'], utc=True)
df3['reviews.dateAdded'] = df3['reviews.dateAdded'].dt.date
df3['reviews.date'] = df3['reviews.date'].str.split('T').str[0]
# Sort the DataFrame by 'reviews.date' in ascending order
df3 = df3.sort_values(by='reviews.date', ascending=True)
```

APP DEVELOPMENT

Step 2 : Data Transformation



```
# ค่า Rating ที่เป็นไปได้  
df1 = df1[df1['reviews.rating'].isin([5.0, 4.0, 3.0, 2.0, 1.0])]  
df1.dropna(subset=['reviews.text', 'reviews.title'], inplace = True)  
  
# เติมค่าสูญหายด้วยฐานนิยม (Mode)  
df1['reviews.date'].fillna(df1['reviews.date'].mode()[0], inplace = True)
```





APP DEVELOPMENT

Step 3 : Data Concatenation

```
df_combined = pd.concat([df1, df2, df3], ignore_index=True) # Combine all 3 Datasets  
df_combined = df_combined.drop_duplicates() # Drop any possible duplicates  
df_combined.to_csv('combined_hotel_reviews.csv', index=False) # Save the combined DataFrame to a CSV file  
print("Combined DataFrame saved to 'combined_hotel_reviews.csv'")
```

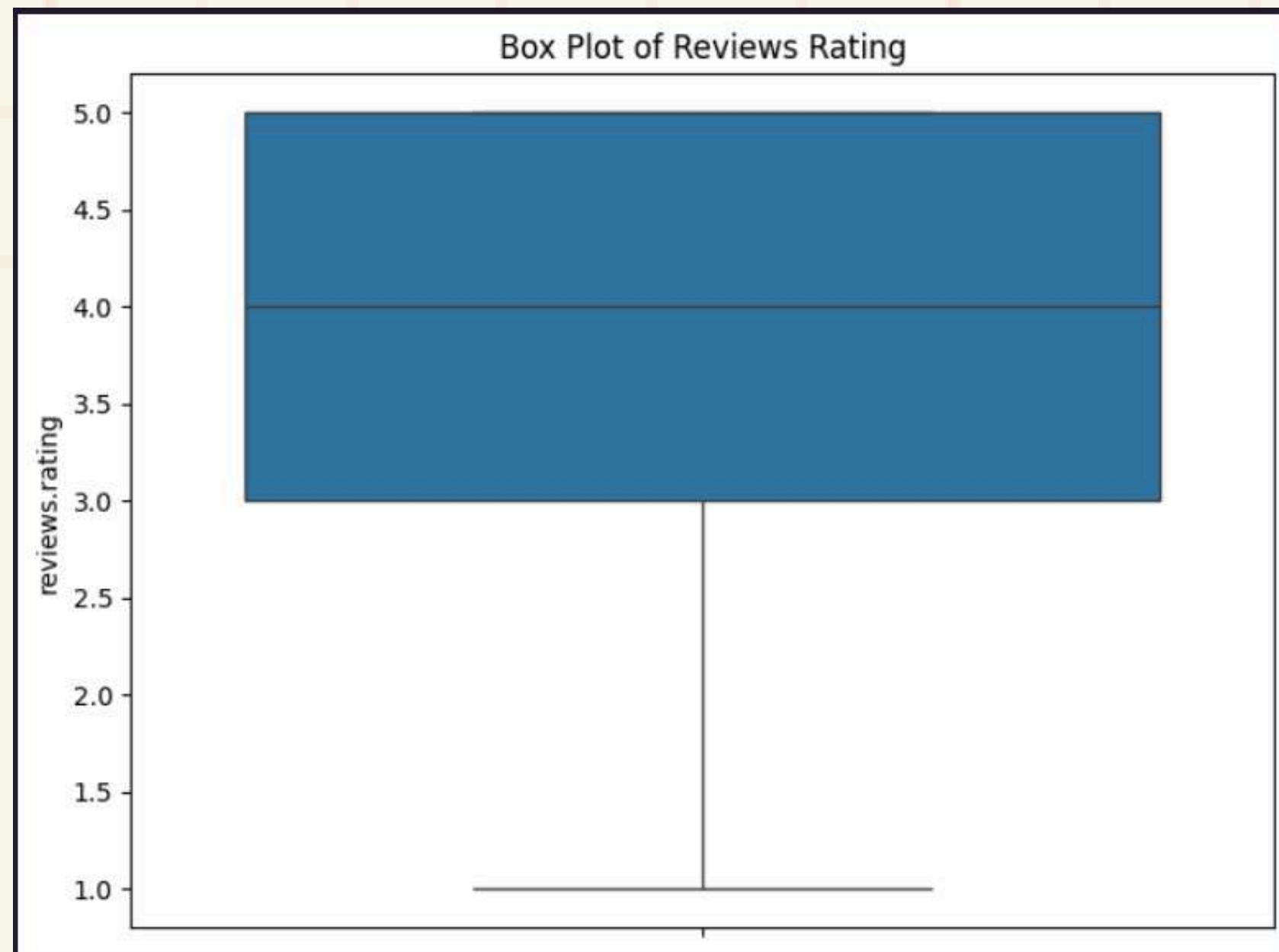
Combined DataFrame saved to 'combined_hotel_reviews.csv'

```
df_combined.tail(2)
```

| | | categories | city | country | name | province | reviews.date | reviews.dateAdded | reviews.rating | reviews.text | reviews.title |
|-------|---|------------|------|---|------|------------|--------------|-------------------|---|--|---------------|
| 53589 | Hotels,Corporate Lodging,Lodging,Hotels Motels... | Asheville | US | Hampton Inn Suites Asheville Biltmore Village | NC | 2019-01-29 | 2018-01-18 | 5.0 | Very clean hotel. We booked an over-sized room... | Great Stay and close to downtown Asheville | |
| 53590 | Hotels and motels,Hotel | Lynchburg | US | Comfort Inn Suites-lynchburg | VA | 2019-01-30 | 2016-05-08 | 5.0 | We have visited this property multiple times o... | Another Incredible Stay! | |

APP DEVELOPMENT

Step 4 : Data Visualization

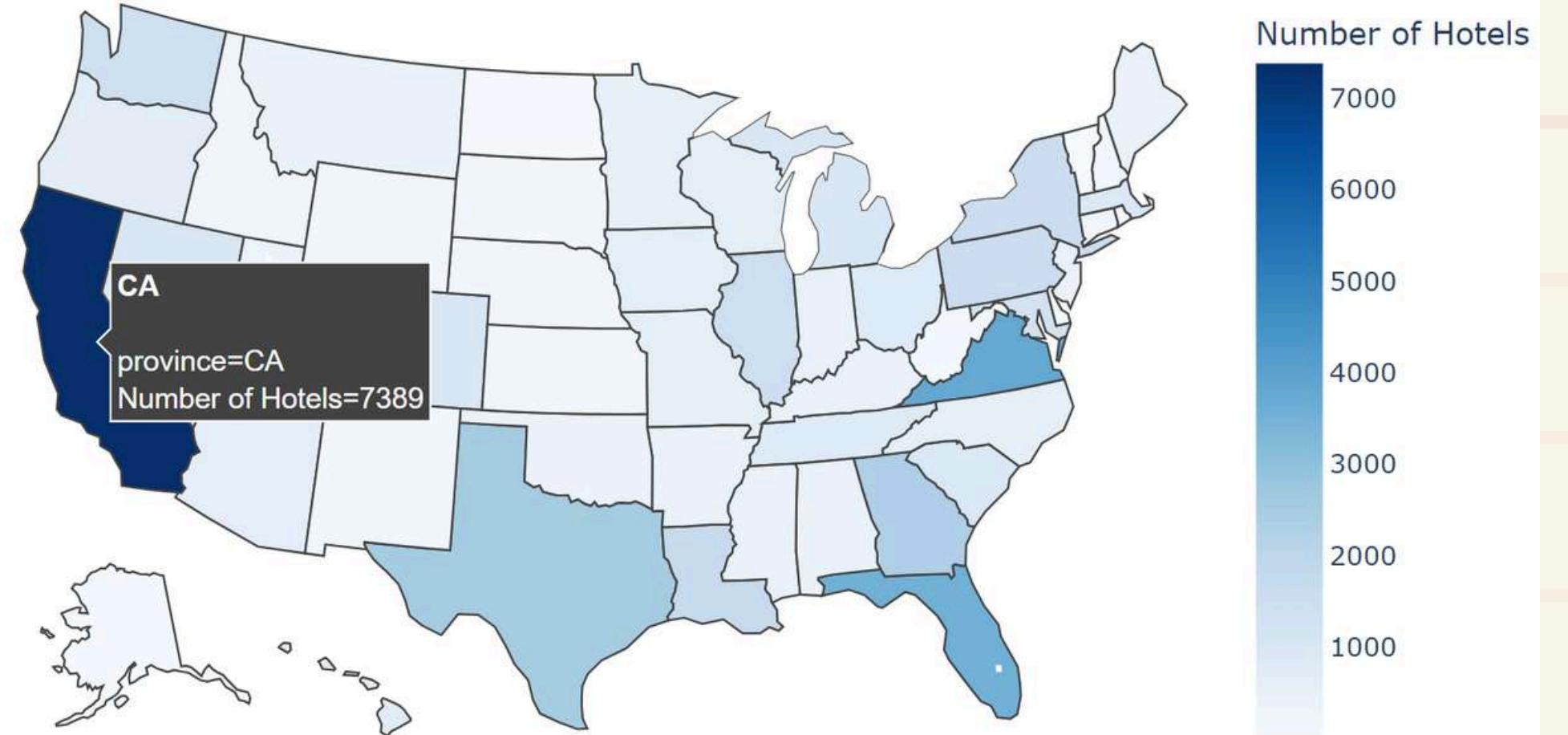




APP DEVELOPMENT

Step 4 : Data Visualization

Distribution of Hotels in the USA by Province

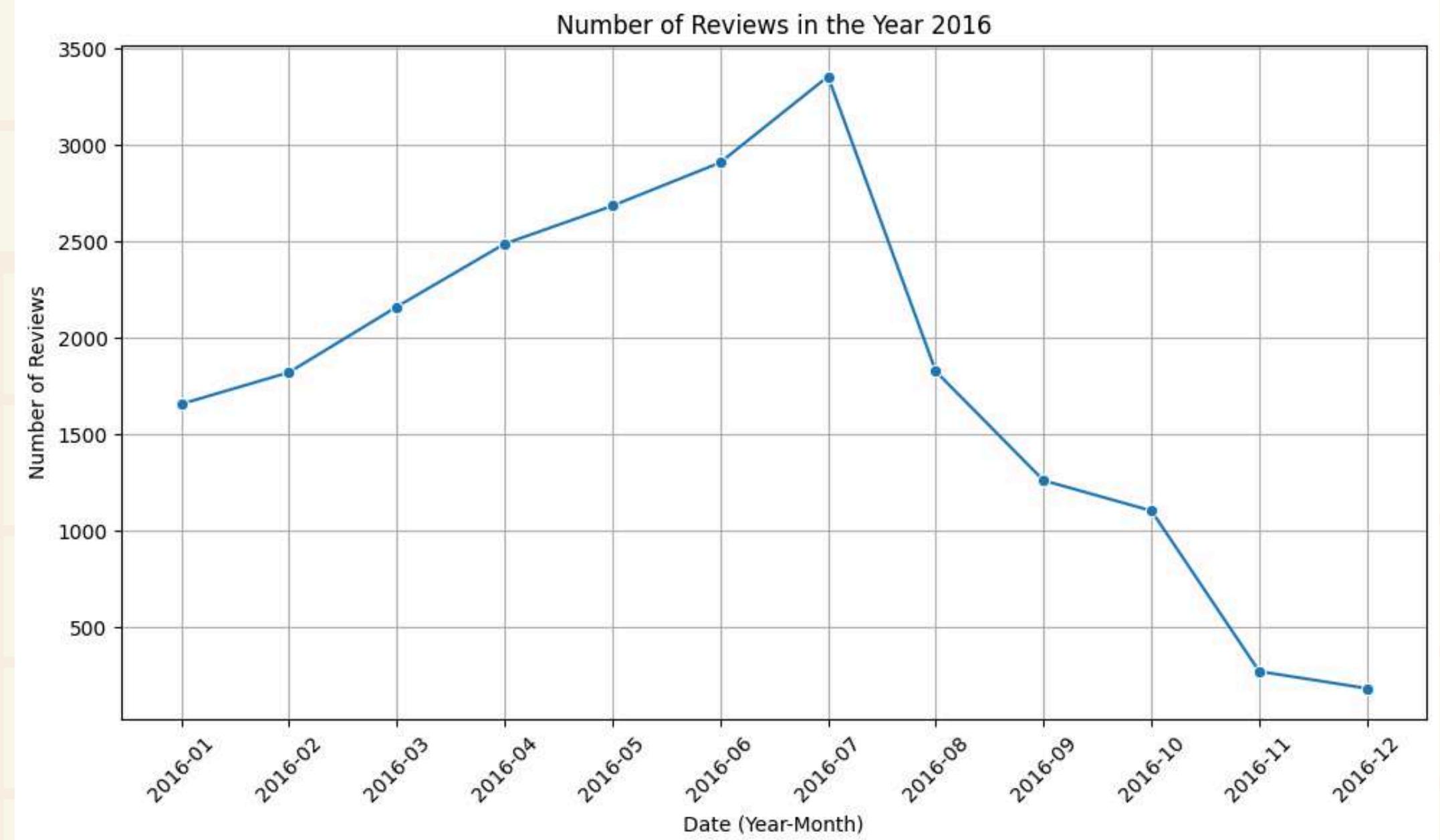


Choropleth Map



APP DEVELOPMENT

Step 4 : Data Visualization



APP DEVELOPMENT

Step 5 : Feature Extraction



```
!pip install langdetect
```

```
from langdetect import detect, DetectorFactory  
import langdetect
```

```
DetectorFactory.seed = 0 # เลือกวิธีการระบุภาษา (0 คือ ระบุตาม library ของ Langdetect)  
def detect_language(text):  
    if isinstance(text, str) and not pd.isna(text): # ตรวจสอบว่าข้อความเป็น str และไม่ใช่ค่า NaN  
        try:  
            return detect(text)  
        except langdetect.lang_detect_exception.LangDetectException:  
            return "unknown"  
    else:  
        return "unknown"  
  
# Detect Language for Feature: reviews.text  
df_combined['reviews.text_language'] = df_combined['reviews.text'].apply(detect_language)  
#df_combined['reviews.title_language'] = df_combined['reviews.title'].apply(detect_language) กรณีที่ต้องระบุภาษาของ Title  
df_combined.to_csv('hotel_reviews_languages.csv', index=False) # Save ไว้จะได้ไม่ต้องมา Run ใหม่
```

APP DEVELOPMENT

Step 5 : Feature Extraction



| | reviews.text | reviews.text_language |
|---|---|-----------------------|
| 0 | Nice City Classic Great location. We stayed an... | en |
| 1 | Big fan I have stayed at The Governor on sever... | en |
| 2 | Convenient Location and Price While vacationin... | en |
| 3 | The hotel was very nice. Has a beautiful outdo... | en |
| 4 | Perfect My girlfriend and I stayed here for ou... | en |

| reviews.text_language | count |
|-----------------------|-------|
| en | 51059 |
| fr | 454 |
| es | 332 |
| de | 264 |
| af | 158 |
| it | 151 |
| pt | 121 |
| no | 86 |

APP DEVELOPMENT

Step 6 : Data Cleaning

```
df_combined[df_combined['reviews.text_language'] == 'unknown'].head(2)
```

| date | rating | reviews.text | reviews.title | cleaned_review | label | reviews.text_language |
|---------|--------|------------------------------|---------------------------|------------------------|-------|-----------------------|
| 7-03-17 | 5.0 | http://www.beachcove520.com/ | Great Staff! | httpwwwbeachcove520com | 1 | unknown |
| 5-10-31 | 1.0 | !!!!210..! | ????????????????????????? | 210 | -1 | unknown |

```
df_combined = df_combined[df_combined['reviews.text_language'] != 'unknown'] # Drop รีวิวที่คาดว่าเป็น Spam
```

```
non_english_reviews = df_combined[df_combined['reviews.text_language'] != 'en'] # สร้าง DataFrame รวบรวมรีวิวที่ไม่ใช้ภาษาอังกฤษ
```

```
total_non_english_reviews = len(non_english_reviews) # ทำการนับจำนวนรีวิวที่ไม่ใช้ภาษาอังกฤษ
```

```
print(f"Total number of reviews that are not English: {total_non_english_reviews}")
```

```
Total number of reviews that are not English: 2149
```

APP DEVELOPMENT

Step 7 : Data Transformation

```
!pip install googletrans==3.1.0a0

from googletrans import Translator
translator = Translator() # สร้าง Translator Object

def translate_to_english(text): # พัฟ์ชันสำหรับการแปลงภาษาบนทวีปฯ
    if isinstance(text, str) and not pd.isna(text):
        try:
            translated = translator.translate(text, dest='en')
            return translated.text
        except:
            return text # ถ้าการแปลงล้มเหลว จะคืนค่า text ดั้งเดิม
    else:
        return text

# เรียกใช้พัฟ์ชันการแปลงภาษาบนตัวแปร reviews.text
df_combined['reviews.text'] = df_combined['reviews.text'].apply(translate_to_english)
```

APP DEVELOPMENT

Step 7 : Data Transformation



✓ การตรวจสอบภาษา - หลังจากแปลงภาษาแล้ว

```
✓ [14] # อัปเดตตัวแปรระบุภาษาว่าเป็นภาษาอังกฤษหรือไม่  
5m df_combined['reviews.text_language'] = df_combined['reviews.text'].apply(detect_language)
```

- จำนวนหัวข้อ (reviews.text) ที่ไม่ใช้ภาษาอังกฤษต้องลดลง

```
✓ [16] non_english_reviews = df_combined[df_combined['reviews.text_language'] != 'en']  
  
total_non_english_reviews = len(non_english_reviews)  
print(f"Total number of reviews that are not English: {total_non_english_reviews}")
```

⇨ Total number of reviews that are not English: 791

APP DEVELOPMENT

Step 8 : Data Cleaning

- Data Cleaning - ลบข้อมูลสูญหายทั้งหมด (ถ้ามี)

```
✓ [36] df_combined.dropna(inplace=True)

✓ [37] df_combined['reviews.text'].isnull().sum()
→ 0
```

APP DEVELOPMENT

Step 8 : SVM Classification Model Training

```
from sklearn.model_selection import train_test_split
from sklearn.svm import SVC
from sklearn.metrics import classification_report

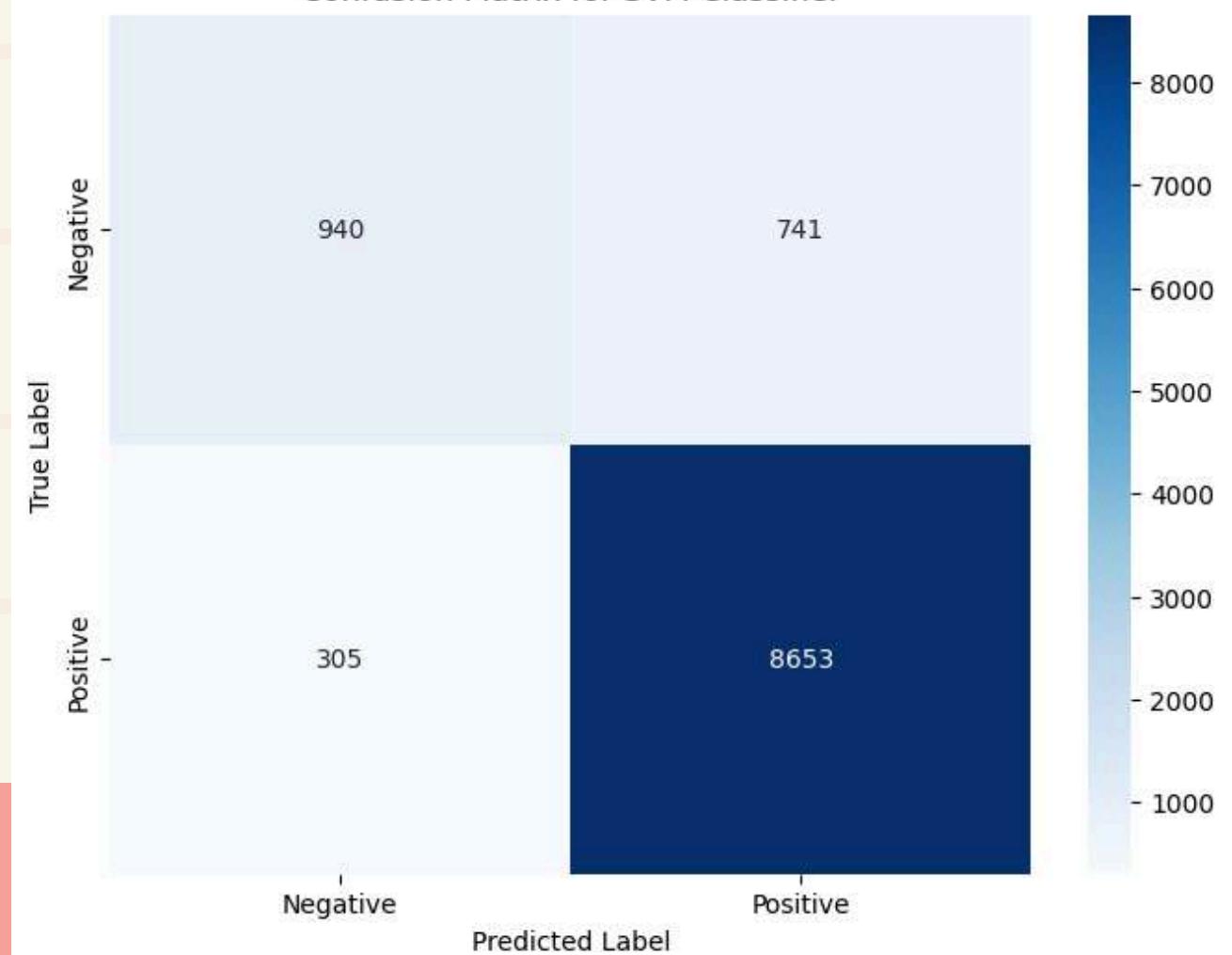
[40] tfidf = TfidfVectorizer(stop_words='english')
X = tfidf.fit_transform(final_df['reviews.text'])
y = final_df['label']

# Train-Test Split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
svm_clf = SVC(kernel='linear') # Model Training
svm_clf.fit(X_train, y_train)

y_pred_svm = svm_clf.predict(X_test) # ท่านรู้สึก Test Set
print("SVM Classification Results:\n", classification_report(y_test, y_pred_svm))
```

| SVM Classification Results: | | | | | |
|-----------------------------|-----------|--------|----------|---------|--|
| | precision | recall | f1-score | support | |
| -1 | 0.76 | 0.56 | 0.64 | 1681 | |
| 1 | 0.92 | 0.97 | 0.94 | 8958 | |
| accuracy | 0.84 | 0.76 | 0.79 | 10639 | |
| macro avg | 0.89 | 0.90 | 0.90 | 10639 | |
| weighted avg | 0.84 | 0.76 | 0.79 | 10639 | |

Confusion Matrix for SVM Classifier



APP DEVELOPMENT

Step 9 : Apply the Recommendation System

```
def clean_text(text): # ฟังก์ชันในการแปลงให้ Input เป็นข้อความที่พร้อมนำไปสกัดคำสำคัญ
    text = re.sub(r'[^w\s]', "", text)
    text = text.lower()
    return text

def extract_keywords(text): # ฟังก์ชันสำหรับการสกัดคำสำคัญ
    stop_words = set(stopwords.words('english'))
    tokens = word_tokenize(text.lower())
    keywords = [word for word in tokens if word.isalnum() and word not in stop_words]
    return keywords

tfidf_matrix = tfidf.fit_transform(final_df['reviews.text'])
```

APP DEVELOPMENT

Step 9 : Apply the Recommendation System

```
def recommend_hotel(input_review, n_recommendations=5): # รับ Input เข้ามา
    input_review_cleaned = clean_text(input_review) # Clean Input เช่น กำจัดคำที่ไม่สำคัญ
    input_review_tfidf = tfidf.transform([input_review_cleaned]) # คำนวณ TF-IDF Vector ของ Input
    input_keywords = extract_keywords(input_review_cleaned) # เรียกใช้ฟังก์ชันสกัด Keywords

    # คำนวณค่าความเหมือน Cosine ระหว่าง Input TF-IDF Vector กับ TF-IDF matrix ของทุกบทวิจารณ์
    cosine_sim = cosine_similarity(input_review_tfidf, tfidf_matrix).flatten()

    # รวมคะแนนของค่าความเหมือน Cosine กับคะแนน Keyword
    keyword_scores = [len(set(input_keywords)) & set(extract_keywords(review))) for review in final_df['reviews.text']]
    keyword_scores = np.array(keyword_scores)
    # ใช้ค่าตั้งมือทั้ง 0.7 และ 0.3 คุณภาพฯไปตามล่าดับ
    combined_scores = 0.7 * cosine_sim + 0.3 * keyword_scores # ได้คะแนนความหมายสูงของแต่ละโรงแรม

    # เรียงลำดับผลลัพธ์การแนะนำ ตามคะแนนความหมายสูงแต่ละโรงแรม
    similar_indices = combined_scores.argsort()[-n_recommendations:][::-1]
    return final_df.iloc[similar_indices] # คืนค่า Top n_recommendations (Default = 5) ในรูปของ Pandas DataFrame
```

APP DEVELOPMENT

Step 10 : Application Testing



- INPUT

```
[53] input_review = "I want a hotel with a pool."
```

- PROCESS

```
[59] recommended_hotels = recommend_hotel(input_review)
     recommended_hotels = recommended_hotels[['name','city',
                                              'province','country',
                                              'reviews.rating','reviews.title',
                                              'reviews.text']].sort_values(by=['reviews.rating'], ascending=False)
```



APP DEVELOPMENT

Application Output

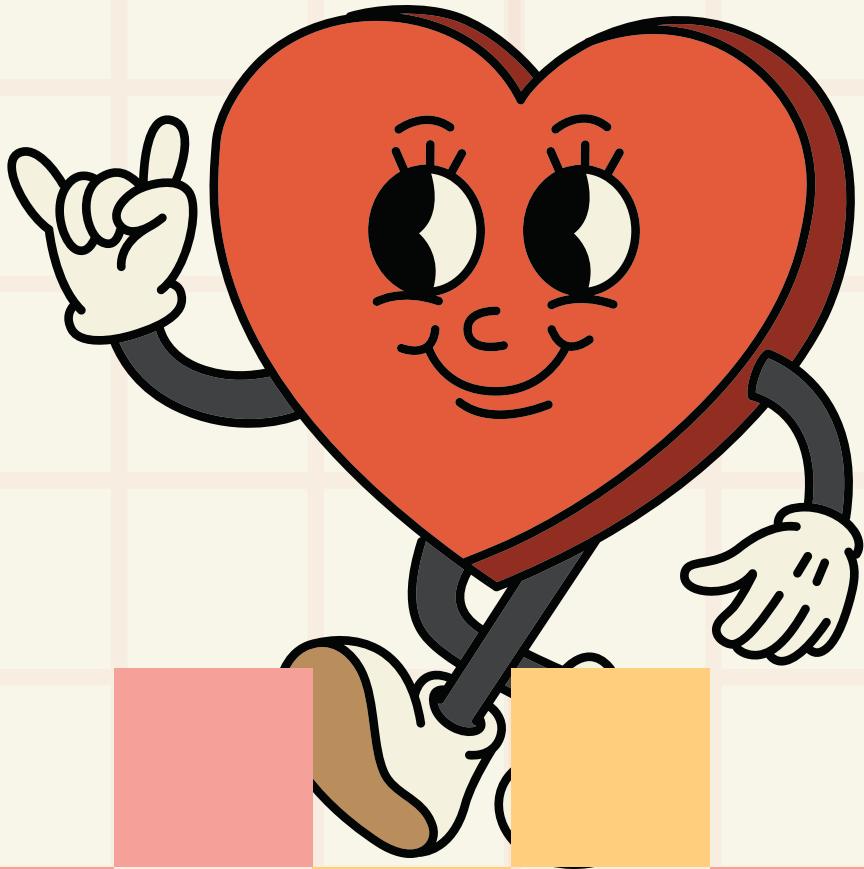
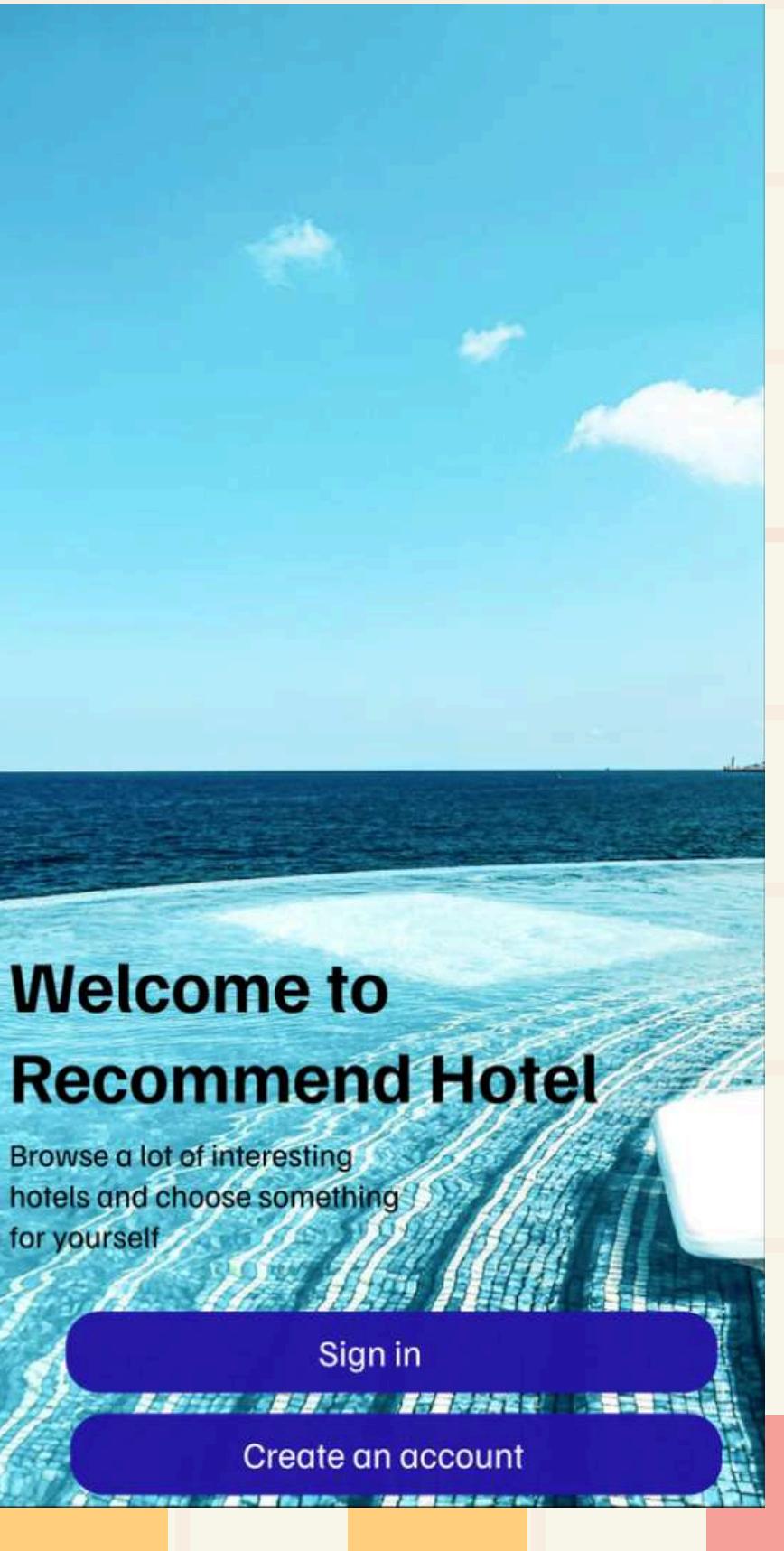
• OUTPUT

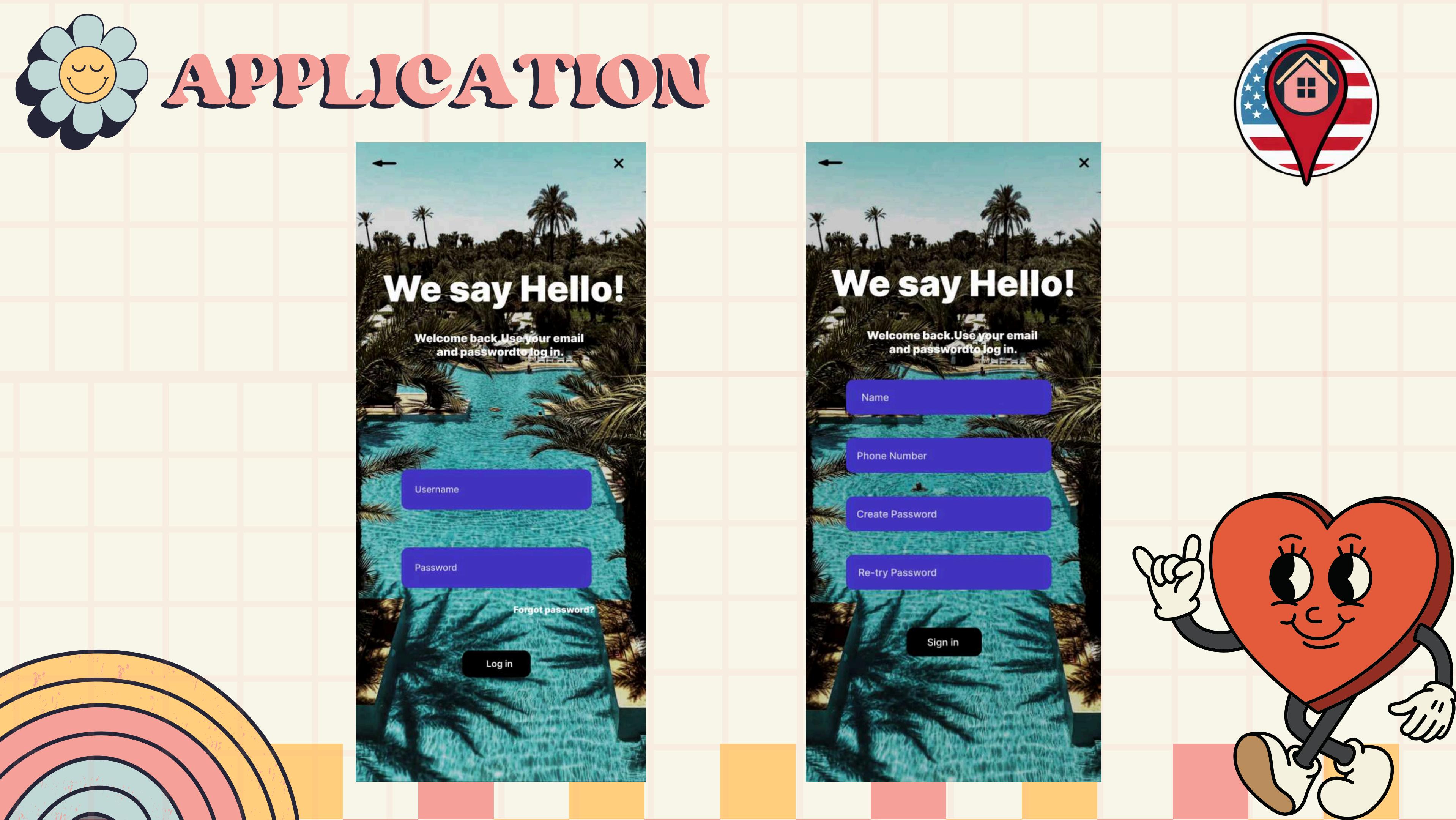
```
[60]: pd.options.display.max_colwidth = None
recommended_hotels
```

| | | name | city | province | country | reviews.rating | reviews.title | reviews.text |
|-------|--|-------------|------|----------|---------|----------------------------------|---|--------------|
| 7648 | Holiday Inn Express Hotel & Suites Emporia | Emporia | VA | US | 5.0 | Hotel | the hotel itself was nice but we were disappointed because i booked this hotel because we want to use the pool and the hot tub after a long ride nice to have but they were not available under repairs | |
| 49717 | Sleep Inn and Suites | Rapid City | SD | US | 5.0 | Excellant | this is a very nice clean and very friendly hotel the entire staff is friendly is very helpful breakfast was fantastic with everything you could possibly want the room was spotless the pool was perfect great hotel great stay would stay again if im in the area | |
| 22577 | Sportsmen's Lodge | Studio City | CA | US | 4.0 | GREAT pool and location. | went with my son to go to universal studios location was great pool is the best rooms are adequate clean standard size but no fridge be sure to ask for one if you want one the hotel is great for location and pool | |
| 45171 | Anaheim Del Sol Inn | Anaheim | CA | US | 4.0 | Great place to stay! | enjoyed staying here and having a continental breakfast it is right across from disney and that is perfect nice spacious rooms and a pool and hot tub if you want one i was very pleased with this hotel | |
| 41700 | French Quarter Suites Hotel | New Orleans | LA | US | 2.0 | Not very happy with the service. | hotel looks very dark weird smell 105 dollars per night complementary internet and continental breakfast location is in french area very handy if u want to go out small pool of u want to swimming 25 dollars parking | |

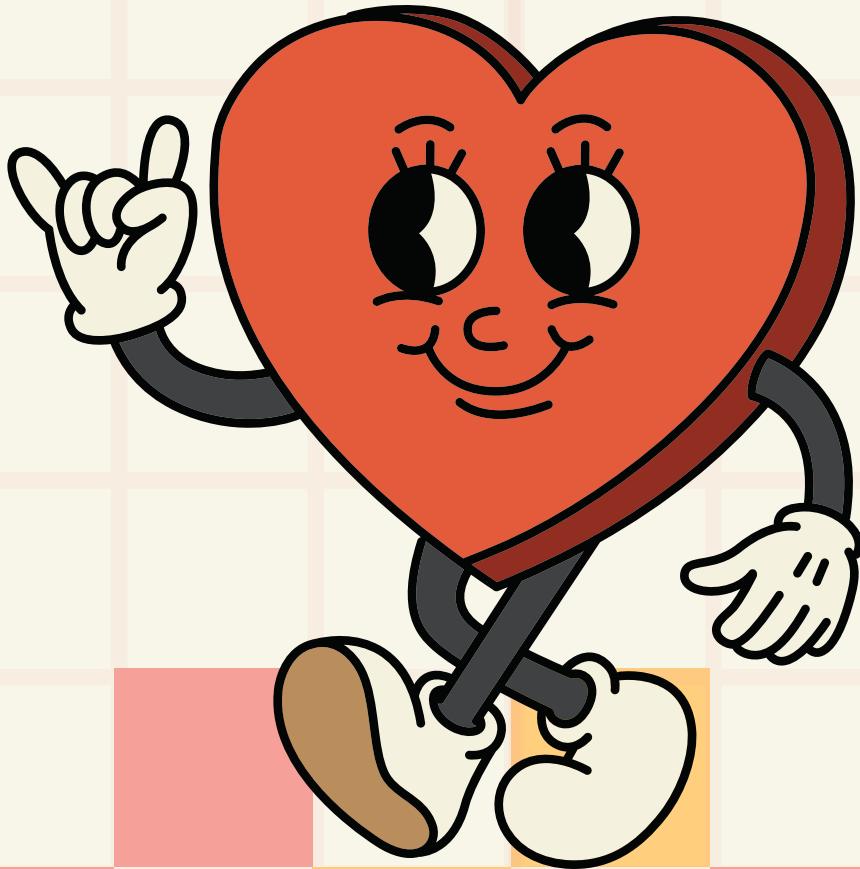
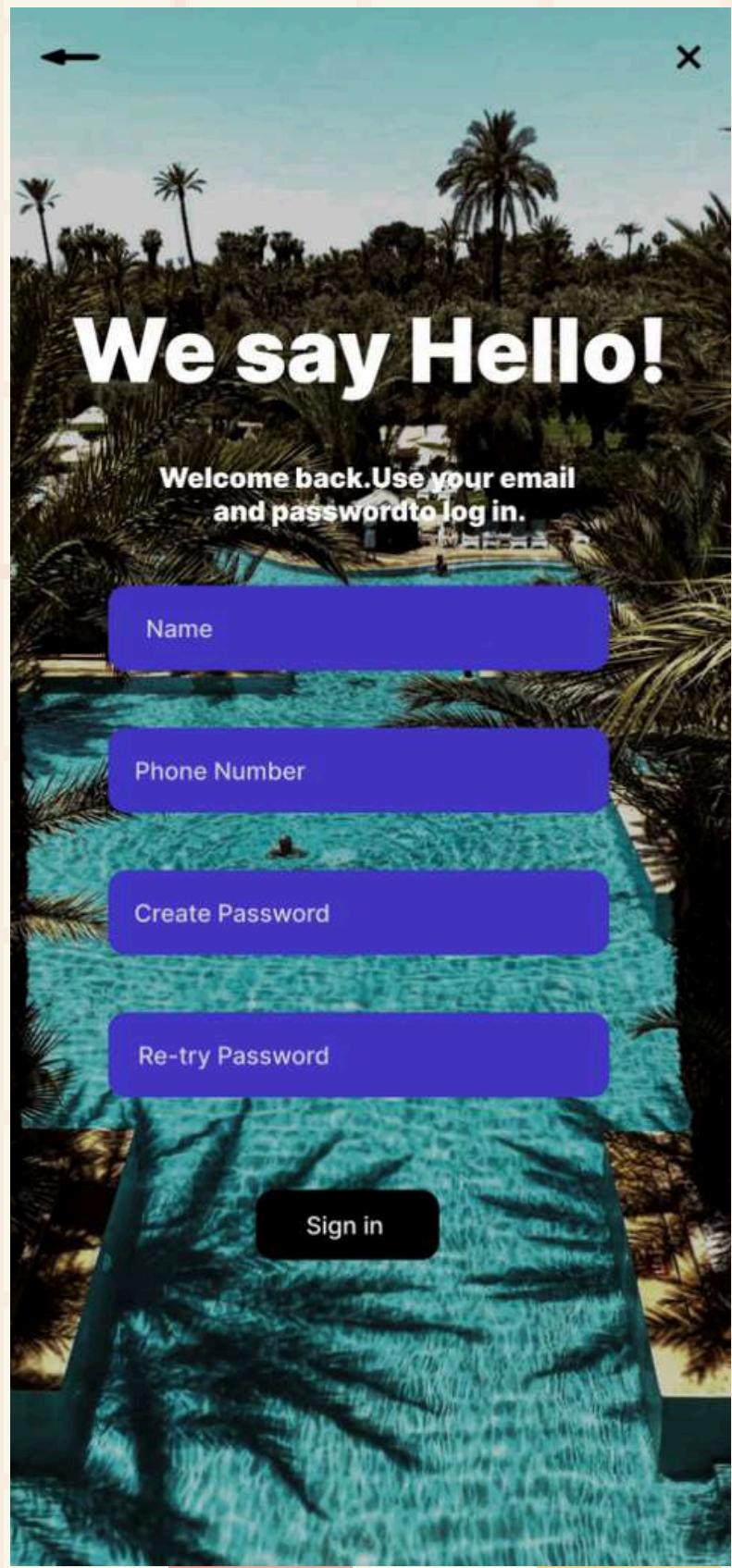
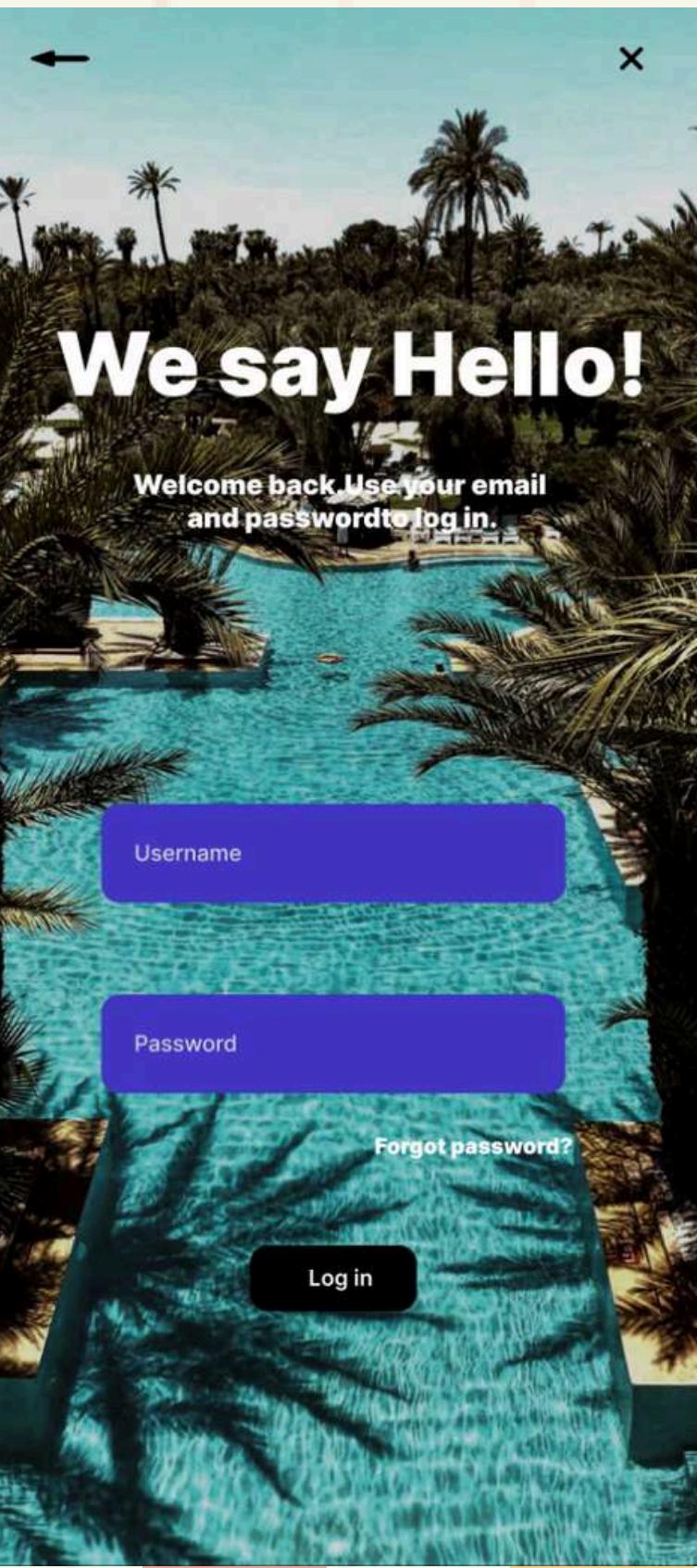


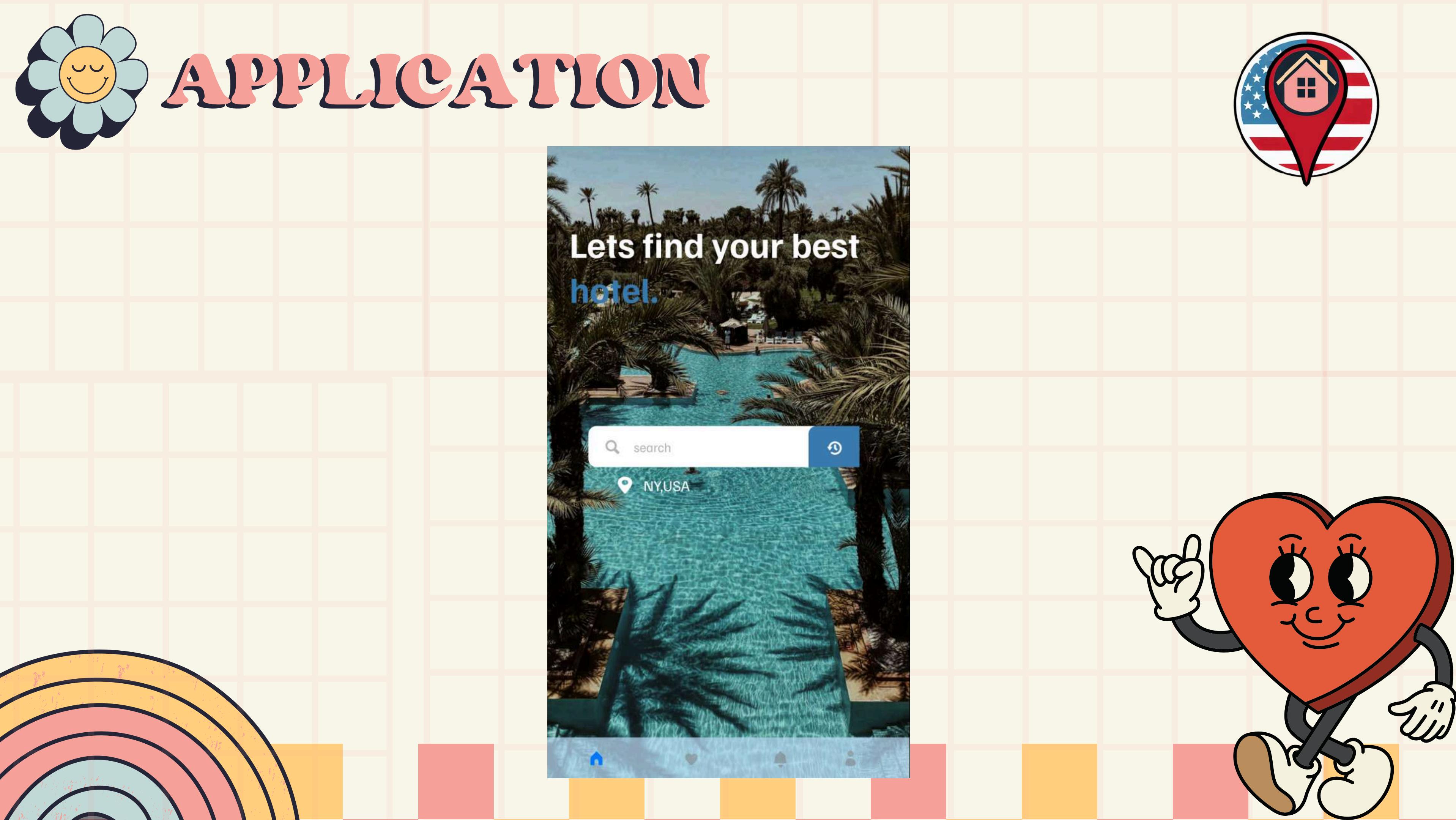
APPLICATION



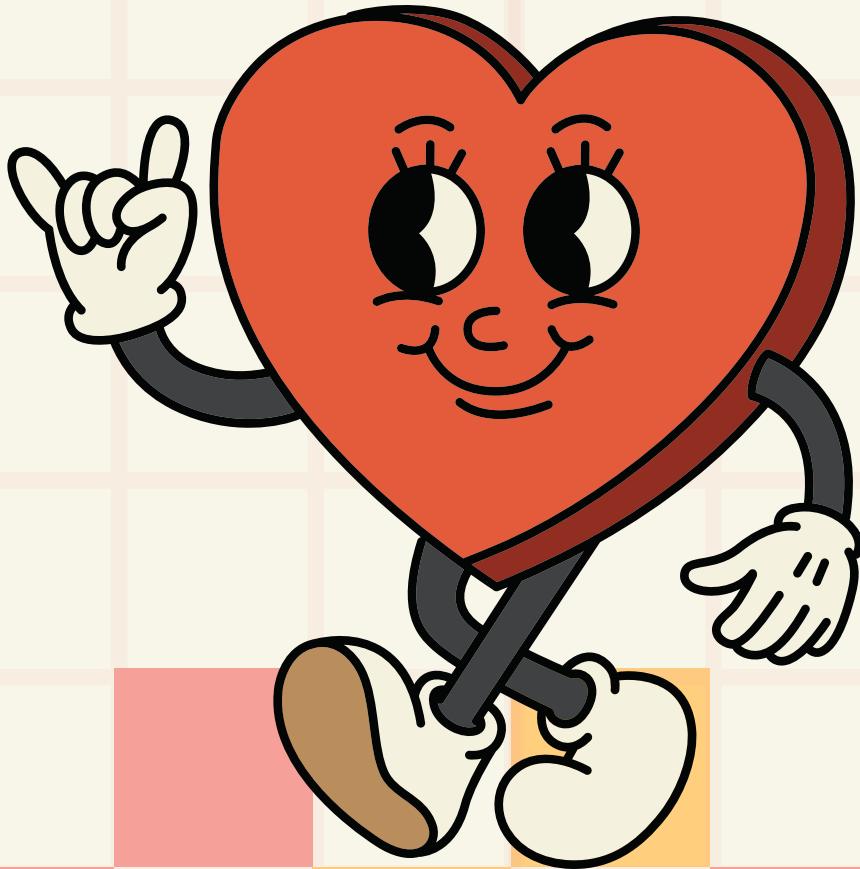
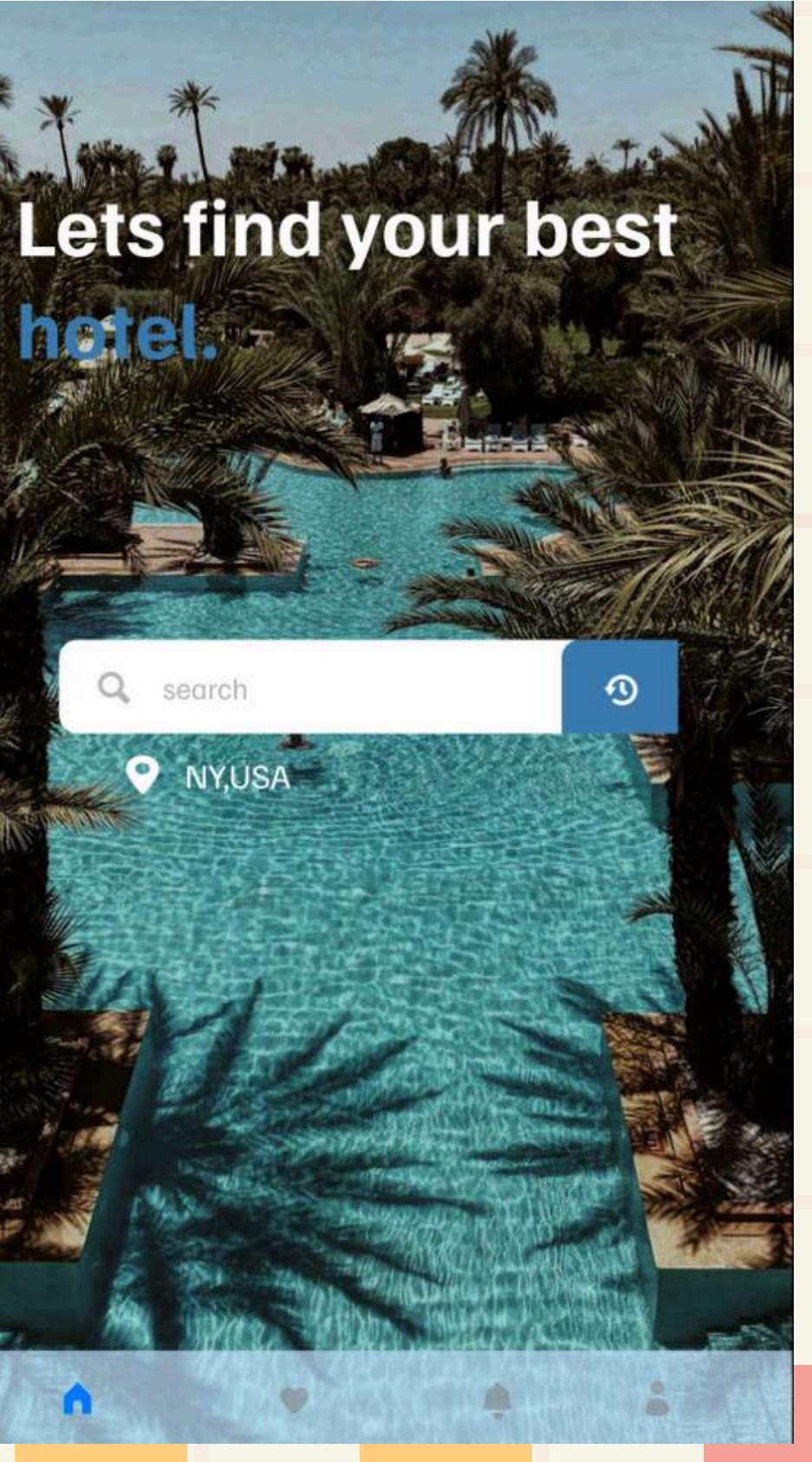


APPLICATION



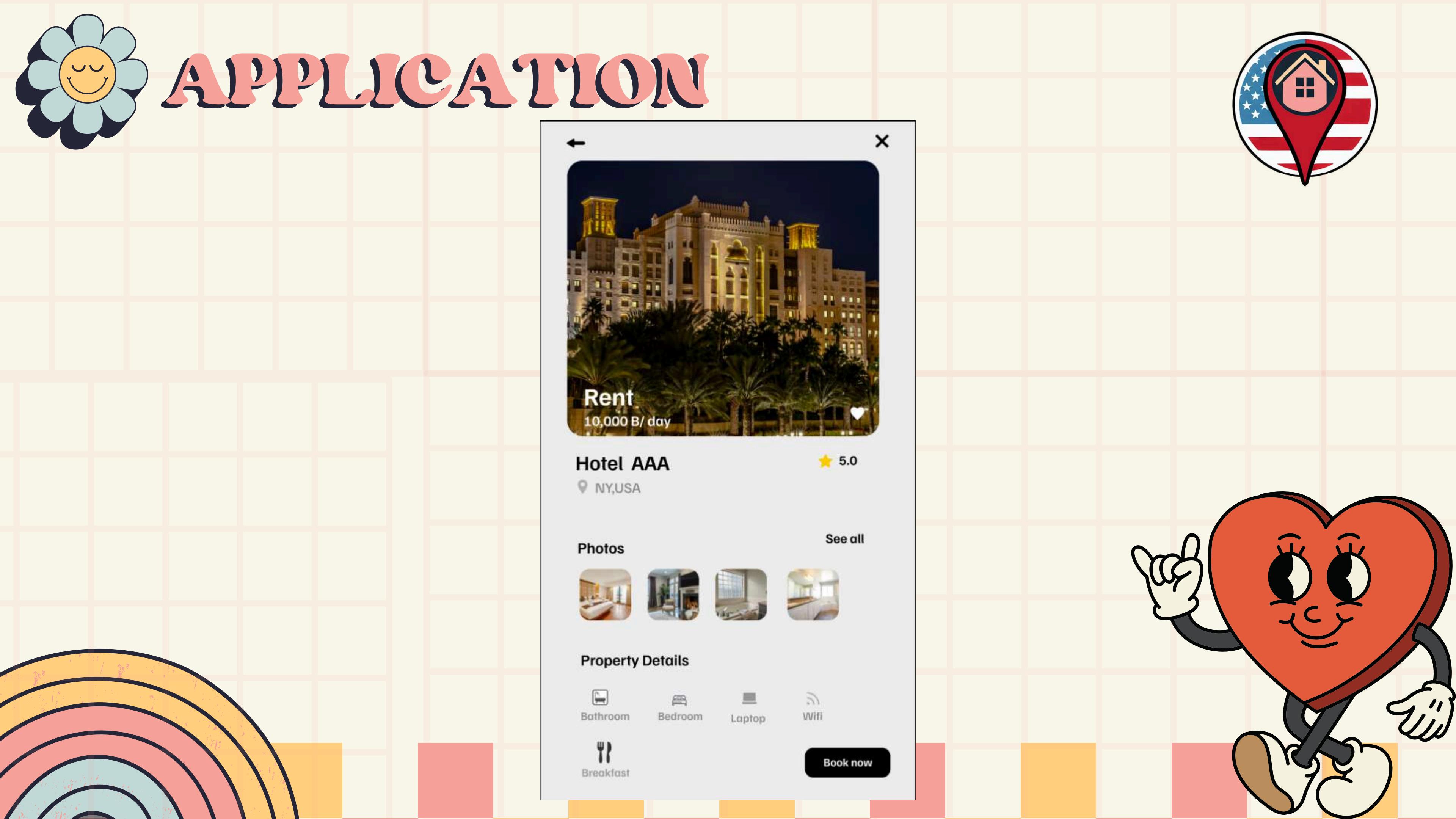


APPLICATION

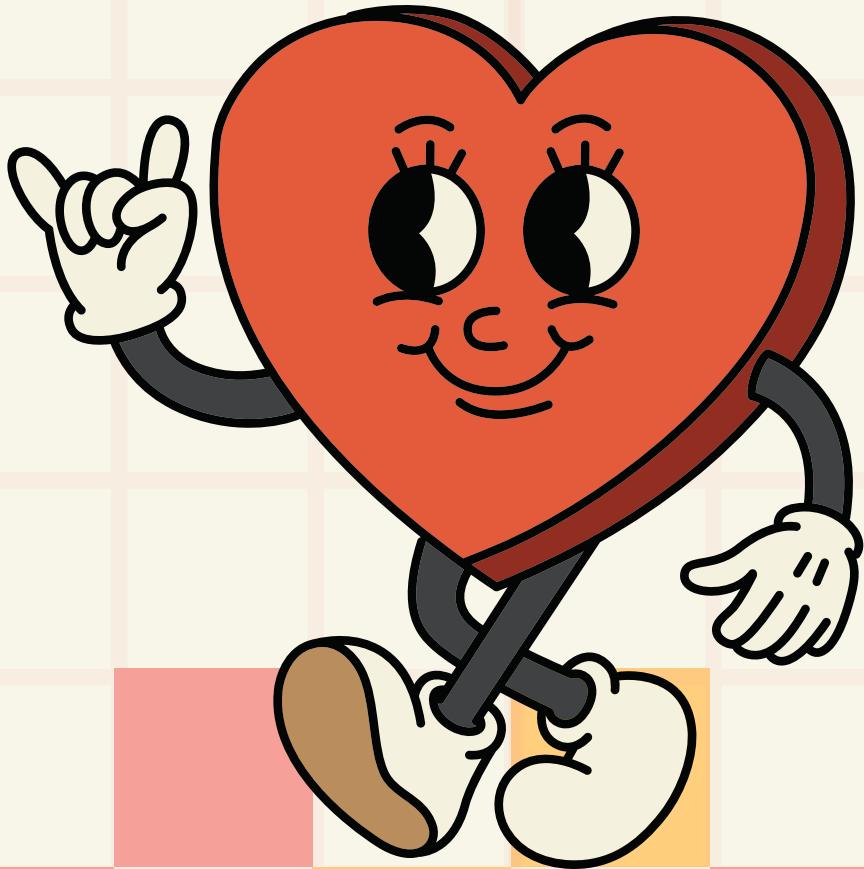
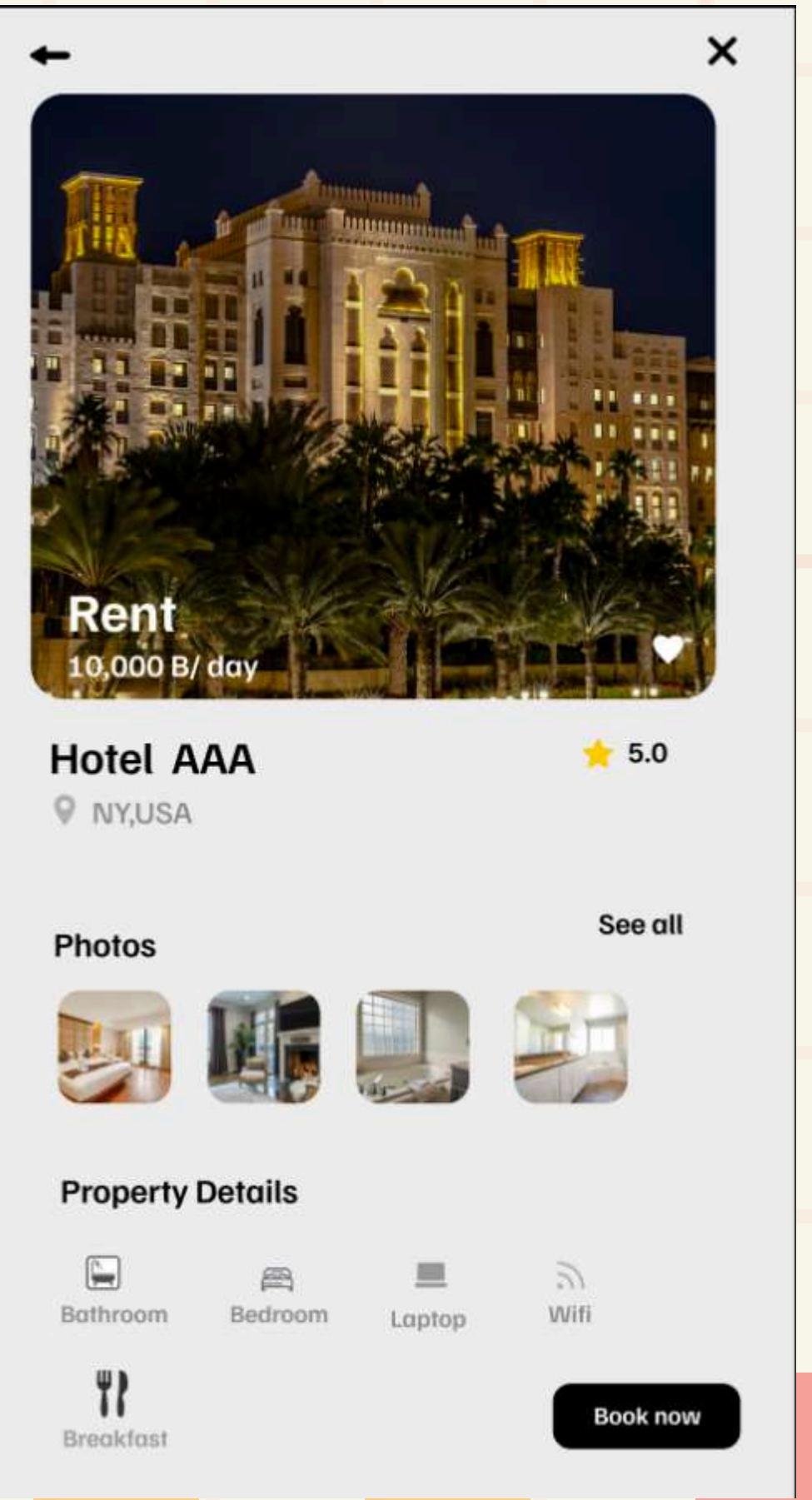


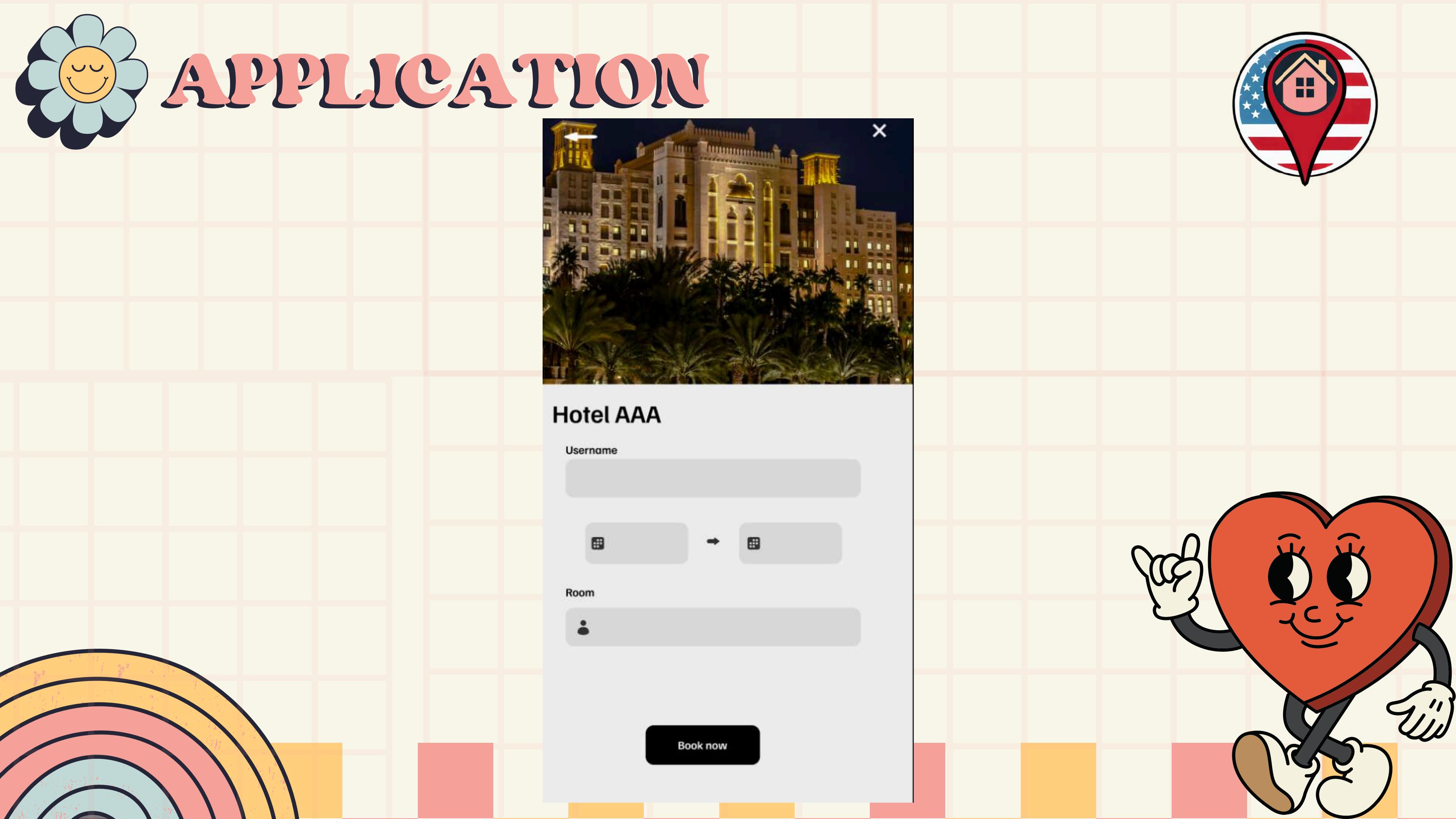


APPLICATION



APPLICATION





APPLICATION

THANK
YOU

