

## CSCI 370 Project Report

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### I. Introduction

A veterinarian office wants to digitize their records to keep track of their customers (owners), and pets including their medical history and any prescriptions they may need. Each customer may have many pets that they take into the animal clinic. The customers are emailed and also mailed reminders about when their pet is scheduled for a visit. The pets are scheduled for appointments with veterinarians including the date, start time, and length of each visit. Each pet has a medical history record that the vet takes notes in each visit and will prescribe prescriptions if necessary including the Rx, cost, how many refills the owners may request and when the refills will expire. The pets are identified by a unique pet ID, also their name, species, weight, fur colour, and age. If the vet needs to schedule to see a pet, they will consult the pet's owner. Note that the intended audience for this application is the clerical staff that interact with customers in the office and not the veterinarians. Even though we have access to medical notes and medication records, it is assumed that the medical staff have their own system for creating and managing this and anything else related to treating the animals.

### II. Application Requirements

1. Look up owner's account
  - a. Show owners contact info
  - b. Show pets owned by owner
  - c. Show description of each pet and ID

Description: If a staff member or customer needs to see information about their account, they can view all details of the owner's contact information and all associated pets, along with the pets information by searching their owner's account number or the pet ID associated with one of the pets.

2. Add a new customer
  - a. Get customer's information
  - b. Enter in profile for each pet

Description: Adds a new customer by acquiring their contact information, and detailed descriptions of each of their pets.

3. Schedule an appointment
  - a. Enter in appointment details for each pet identified by their account ID

Description: If a customer requests a visit, staff can schedule an appointment for the pet by identifying their ID, date, time, and length of the visit.

4. View a pet's medical history
  - a. Show medical record history
  - b. Show medication history

Description: If an owner wants to inquire about their pet's medical history, staff can view information detailing all medical visit notes and previous prescriptions.

5. Show list of customers that clerk will send reminders to
  - a. Search for customers that haven't had an appointment in over 1 year
  - b. Display their contact information so that the clerk can email or mail them a reminder

- c. Generate a report

Description: Like other vet offices and dental offices, clerical staff will remind clients when it is time for an annual check up. To achieve this, the staff can generate a report detailing all customers that have not visited the vet clinic in over 1 year.

- 6. Cancel an appointment
  - a. Look up appointment history for a pet
  - b. Remove desired appointment

Description: If an owner needs to cancel an appointment for their pet, staff can view all appointments by searching the pet's ID, and select the desired appointment to cancel.

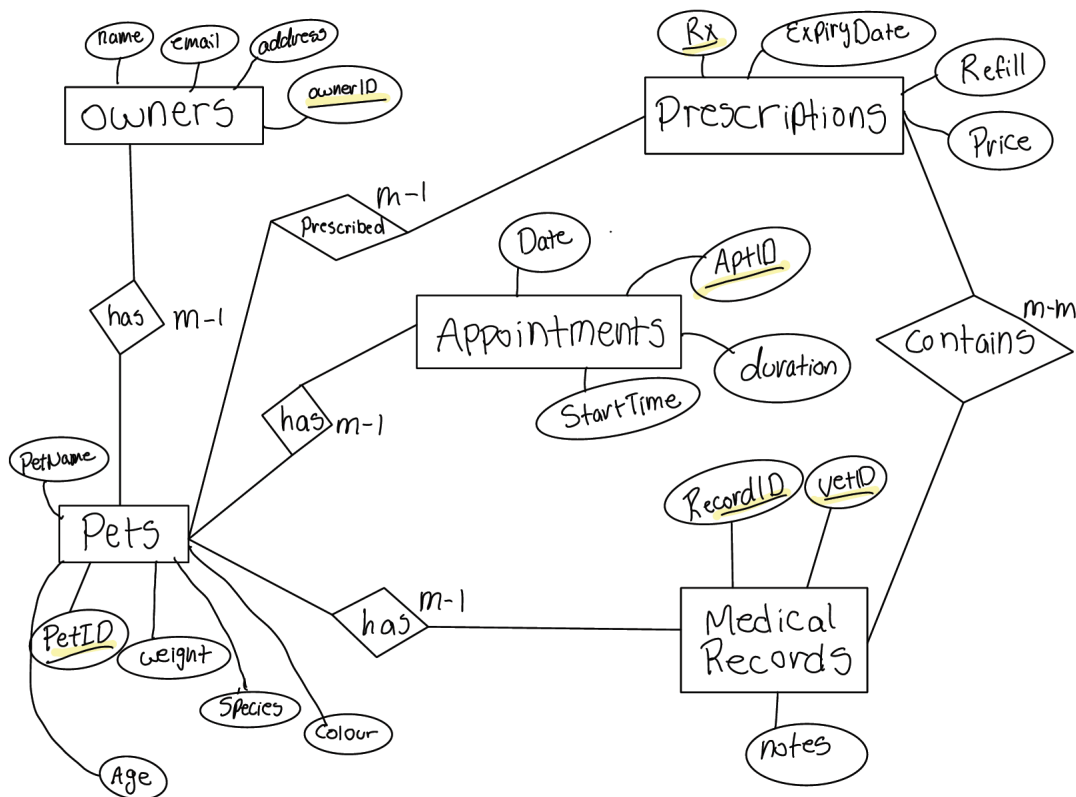
### III. Database Design

#### Data Descriptions

1. Owners - table holds all information associated with each pet owner/ customer.
  - a. OwnerID (NUMBER 6): A unique identifier that is given to each customer.
  - b. Name (VARCHAR2(30)): Holds the customer's first and last name.
  - c. Email (VARCHAR2(50)): Holds the customer's email address.
  - d. Address (VARCHAR2(100)): Holds the customer's full mailing address.
2. Pets - The table contains information about the pets at the clinic.
  - a. PetID (NUMBER 6): A unique identifier addressed to each pet.
  - b. PetName (VARCHAR2(30)): Contains pet's name.
  - c. Age (VARCHAR2(10)): Contains pet's age in years, or months if less than 1 year.
  - d. Species (VARCHAR2(30)): Contains a brief description of what type of species the pet is.
  - e. Colour (VARCHAR2(20)): Contains a brief description of the pet's colourings.
  - f. Weight (NUMBER(4)): Contains their weight in pounds.
  - g. OwnerID (NUMBER(6) REFERENCES OWNERS): References owner's account ID, to see which pet belongs to whom.
3. Appointments - This table contains all scheduled visits that the owner takes their pet into the clinic.
  - a. AptID (NUMBER(10)): A unique identifier given to each appointment.
  - b. PetID (NUMBER(6) REFERENCES PETS): Contains the pet's identifier that the appointment is about.
  - c. AptDate (DATE): The date the pet is scheduled for a visit in mm/dd/yyyy format.
  - d. StartTime (TIMESTAMP(6)): The time of the day the vet is scheduled, in 24 hour format.
  - e. Duration (Number(3)): The estimated length of the scheduled visit, in minutes.
4. MedicalRecords - This table contains medical notes that describe the purpose of each visit from a pet's veterinarian. This includes previous surgeries or vaccinations. Since appointments may just be consultations for an owner, this is not related to the appointment table as each appointment may not require medical notes.
  - a. RecordID (NUMBER(10)): A unique identifier for each medical record.
  - b. VetID (CHAR(5)): Contains the Veterinarian's identifier that performed the surgery or vaccination.
  - c. PetID (NUMBER(6) REFERENCES PETS): Contains the pet's identifier that the record is about.

- d. Notes (VARCHAR2(200)): Contains medical descriptions of the procedure performed.
- 5. Prescriptions - This table contains all prescriptions that may be prescribed to a pet by the veterinarian.
  - a. Rx (NUMBER(8)): A unique medication identifier for the prescribed medicine.
  - b. Refill (NUMBER(2)): The number of times the owner may refill this prescription.
  - c. ExpiryDate (DATE): The date that the medication expires.
  - d. Price (NUMBER(8,2)): The total cost of the medication in Canadian dollars.
- 6. Contains - This table is a many-to-many relationship table that keeps track of which veterinarian prescribed the medication, and the purpose of the medicine by linking the medical records and prescription tables. This is useful for generating medical reports.
  - a. Rx (NUMBER(8) REFERENCES PRESCRIPTIONS): A unique medication identifier for the prescribed medicine.
  - b. RecordID (NUMBER(10) REFERENCES MEDICALRECORDS): A unique identifier for each medical record.
  - c. VetID (CHAR(5) REFERENCES MEDICALRECORDS): Contains the Veterinarian's identifier that performed the surgery or vaccination.

### Entity Relationship Diagram



## Relational Schema

### SCHEMA

Owners ( OwnerID , Name, Email, Address );

Pets ( PetID , Petname, Age, Species, Colour, weight, OwnerID );

Appointments ( AptID , PetID , Date, StartTime, Duration );

MedicalRecords ( RecordID , VetID, PetID , Notes );

Contains ( Rx , RecordID , VetID );

Prescriptions ( Rx , Refill, ExpiryDate, Price );

*Underlined attributes represent primary keys and foreign keys are indicated by the highlighted portions.*

## IV. Sample Data

## Owners

OwnerID	Name	Email	Address
198775	Hollis Stillwell	hstillwell0@theatlantic.com	8893 Bonner Lane
337407	Lowell Oxtaby	loxtaby1@cyberchimps.com	6 Dawn Terrace
154436	Darcee Danne	ddanne2@dot.gov	1 Blackbird Junction
165439	Elsie Helstrip	ehelstrip3@a8.net	2 Gerald Alley
142561	Thain Creese	tcreese4@drupal.org	530 Anthes Road
939611	Adolphe Kacheller	akacheller5@sitemeter.com	96 Lotheville Parkway
648608	Ariadne Seiller	aseiller6@google.fr	9858 Bultman Alley
393378	Karel Hamshere	khamshere7@imageshack.us	77 Porter Trail
576099	Shanna Slimon	sslimon8@examiner.com	40 Steensland Point
444954	Athena Cuseick	acuseick9@psu.edu	10 Lerdahl Trail
342513	Walt La Rosa	wlaa@blogger.com	1275 Melrose Alley
259609	Catlin Tzarkov	ctzarkovb@surveymonkey.com	6 Lyons Center
903786	Munroe Coleson	mcolesonc@sbwire.com	70117 Golf Course Court
915575	Cherie Melson	cmelsond@ning.com	12 Sage Plaza
643449	Hamlen Lawton	hlawtone@theforest.net	2482 Haas Alley
611190	Fredra Tollfree	ftollfreef@imgur.com	0 Algoma Circle
555542	Agna Kneeland	akneelandg@google.es	8 Thompson Place
174521	Mallorie Conring	mconringh@feedburner.com	78 Vermont Parkway
118674	Theda Le Bosse	tlei@cornell.edu	5687 Bashford Place
738949	Harbert Blindt	hblindtj@fema.gov	2 Washington Point
171509	Marin Bottlestone	mbottlestonek@cbsnews.com	6573 Porter Road
367688	Siegfried Whittlesey	swhittleseyl@blogger.com	27796 Lakeland Hill
137104	Mychal Mouan	mmouanm@sciencedaily.com	86 Bartillon Trail
423875	Alec Jackett	ajackettn@fastcompany.com	48413 Di Loreto Avenue
469771	Rosetta Thoma	rthomao@europa.eu	02 Bashford Lane
130324	Libbie Raff	lraffp@hugedomains.com	5 Buhler Road
637315	Lucilia Merrikin	lmerrikinq@shareasale.com	75 Coolidge Hill
890244	Boy Baudassi	bbaudassir@google.com	24 Atwood Pass
721204	Tobey Jewkes	tjewkess@mayoclinic.com	26 Bellgrove Trail
584225	Retha Syddie	rsyddiet@sfgate.com	69267 Rigney Place
943308	Warren Kalkofer	wkalkoferu@google.es	715 Warner Hill
991728	Anabel Vanyushin	avanyushinv@disqus.com	596 Scott Road
950035	Roland Prin	rprinw@blogspot.com	3 Truax Circle
165180	Sile Dafydd	sdafyddx@nsw.gov.au	388 Ridgeview Pass
285629	Ivar Triebner	itriebnery@accuweather.com	37938 Vermont Court
801153	Dane Maypothor	dmaypothorz@sogou.com	3016 Scofield Place
204220	Viv Plan	vplan10@paginegialle.it	9735 Hollow Ridge Alley
483986	Retha Goodge	rgoodge11@canalblog.com	916 Vernon Hill
634763	Conant Vanni	cvanni12@apache.org	20058 7th Lane
652444	Lacey Mansion	lmansion13@plala.or.jp	690 Steensland Junction
188315	Rogério Cheley	rcheley14@skyrock.com	3 Stone Corner Point
576608	Berny Biscomb	bbiscomb15@meetup.com	3518 Nelson Lane
563027	Asher Dunton	adunton16@army.mil	85 Dexter Point
308115	Stillmann Woehler	swoehler17@nyu.edu	62829 Village Green Court
653793	Erich Verbrugghen	everbrugghen18@sciencedirect.com	2680 Armistice Way
519665	Valentino Rowly	vrowly19@imageshack.us	6 Hazelcrest Trail
308657	Blair Lapre	blapre1a@a8.net	6 McBride Terrace
284959	Natty Drinkale	ndrinkale1b@nydailynews.com	65 Sundown Pass
373802	Dulcinea Bryant	dbryant1c@163.com	22282 Hanson Point
508439	Andromache Tustin	atustin1d@merriam-webster.com	2 Meadow Ridge Terrace

# Pets

PetID	PetName	Age	Species	Colour	Weight	OwnerID
385764	Zulu	7	dog	Brown	4	198775
541265	Golf	4	cat	Tan	12	337407
180226	Alfa	13	alpaca	White	82	154436
851620	Sierra	11	pig	Pink	86	165439
603978	Lima	16	mouse	Grey	84	142561
830373	Zulu	7	hamster	Calico	46	939611
704555	Prince	9	ferret	Grey	34	648608
840228	Sally	9	newt	Green	86	393378
886910	Delta	9	gerbil	Brown	54	576099
838185	Juliett	0	gerbil	Brown	10	444954
800088	India	4	cat	Black	94	342513
377950	Tango	1	snake	Yellow	58	259609
766917	Foxtrot	4	mouse	Grey	64	903786
276675	Charlie	2	toad	Green	99	915575
167780	Sierra	1	sheep	White	8	643449
433622	Alfa	5	horse	Burgundy	23	611190
865331	India	11	horse	Black	1	555542
446976	Larry	13	cat	White	31	174521
789434	Puff	6	rabbit	Grey	87	118674
133414	Harry	3	hedgehog	Grey	2	738949
528012	November	7	cat	Calico	7	171509
225400	Victor	0	mouse	White	25	367688
223017	Delta	4	cat	Brown	51	137104
372652	Alfa	1	hedgehog	Grey	92	423875
598160	Oscar	3	snake	Yellow	95	469771
655148	Victor	4	dog	Brown	12	130324
483139	Sierra	14	ferret	Grey	86	637315
698201	Delta	5	rabbit	Black	76	890244
814752	Echo	1	frog	Green	75	721204
283466	November	13	ferret	Tan	71	584225
158984	Yankee	8	cat	Tan	1	943308
705378	Golf	2	ferret	Tan	2	991728
233919	Victor	4	cat	White	9	950035
100153	Delta	8	cat	Striped	8	165180
746510	Victor	4	dog	Black	95	285629
421094	Zulu	12	pig	Pink	33	801153
448359	India	9	alpaca	Brown	52	204220
619774	Delta	15	mouse	Grey	47	483986
228770	Todd	4	toad	Green	27	634763
341434	Papa	15	tortoise	Green	16	652444
167837	Romeo	2	goat	Grey	25	188315
634148	Golf	12	cat	White	39	576608
446083	Oscar	2	cat	Brown	39	563027
812451	Zulu	10	cat	Striped	46	308115
518677	Romeo	10	cat	Calico	52	653793
640157	Roley	6	cat	Brown	9	519665
670837	November	10	cat	Grey	78	308657
616752	Chester	1	cat	Grey	86	284959
710139	Berry	11	cat	Black	52	373802
193520	Julie	4	cat	Black/White	6	508439
475846	Papa	6	cat	Black	44	652444
742314	Zulu	11	cat	Grey	50	188315
522511	Juliett	0	cat	Orange	29	576608
482053	Bruce	4	dog	Brown	2	563027
340099	Zulu	4	dog	White	16	308115
589603	Lima	8	cat	Black	50	653793
115141	Bravo	12	cat	Brown	74	519665
187667	Rodney	7	cat	White	6	308657
830806	Matilda	9	dog	Black	14	284959
351786	Mike	1	dog	Black	40	373802

# Appointments

AptID	PetID	AptDate	StartTime	Duration
9294584046	385764	07/01/2017	15:02	120
2224406185	541265	05/20/2017	14:25	86
7673051117	180226	10/03/2017	9:35	100
4484852578	851620	07/14/2019	8:26	46
8662995720	603978	09/05/2017	12:56	106
1285797493	830373	11/11/2019	15:32	117
8852033459	704555	03/25/2019	13:30	47
5660623190	840228	10/12/2017	11:05	100
4027237320	886910	08/08/2019	16:56	93
1540936414	838185	07/25/2018	9:38	111
5138659782	800088	12/31/2019	8:14	60
1711686905	377950	06/18/2018	11:16	39
3680852600	766917	02/07/2019	15:20	61
3151436323	276675	11/11/2018	15:03	73
3781034593	167780	04/14/2019	8:49	30
1108834582	433622	09/16/2018	12:57	77
4812723050	865331	10/07/2017	9:29	64
6708071916	446976	10/05/2018	14:56	58
2091070025	789434	07/21/2017	8:14	108
3062483482	133414	06/08/2018	12:02	86
2428217712	528012	07/01/2019	11:13	18
9799693500	225400	04/04/2019	9:03	69
5734068241	223017	03/03/2018	9:02	90
8676256940	372652	09/17/2017	12:25	88
7958916833	598160	07/20/2018	15:44	42
8966788262	655148	08/03/2017	15:09	91
9154388643	483139	06/17/2017	16:30	110
8623730224	698201	02/21/2017	16:23	17
3615302354	814752	03/31/2017	10:26	23
2762360374	283466	07/08/2019	11:59	60
7588913460	158984	10/04/2019	16:41	52
3068142407	705378	06/03/2017	13:22	15
3514037870	233919	01/21/2020	9:29	119
1178017486	100153	07/06/2018	8:41	71
5646626285	746510	10/09/2018	16:23	81
1540999955	421094	12/09/2017	8:23	115
2262420203	448359	03/20/2017	11:56	70
6283774806	619774	01/07/2019	15:25	83
1144170982	228770	09/29/2017	9:18	20
8359814252	341434	03/22/2019	11:57	92
8377173290	167837	03/21/2019	9:11	25
5720515631	634148	05/14/2019	15:56	33
1635030226	446083	10/09/2018	13:10	67
9158377859	812451	04/11/2018	10:12	51
7590017345	518677	06/01/2017	10:48	34
6482805183	640157	03/14/2019	16:17	26
2319822895	670837	07/21/2017	12:24	70
8349818867	616752	05/13/2017	8:14	59
8615254419	710139	06/04/2019	9:56	30
6206258718	193520	07/27/2019	8:09	43
6206258719	475846	07/28/2019	9:50	15
6206258720	742314	07/27/2019	10:00	20
6206258721	522511	07/27/2020	10:10	25
6206258722	482053	07/26/2019	10:20	30
6206258723	340099	07/25/2019	10:30	15
6206258724	589603	07/27/2021	10:40	24
6206258725	115141	07/24/2019	10:50	25
6206258726	187667	07/27/2020	11:00	26
6206258727	830806	07/26/2019	11:10	27
6206258728	351786	07/25/2019	11:20	28

# MedicalRecords

RecordID	VetID	PetID	Notes
2666987175	7GD9E	385764	Rad node dissection NOS
2666987176	3QX7J	541265	Radius/ulna inj op NOS
2666987177	8PG5H	180226	Pull-thru res rectum NOS
2666987178	8PS8Z	851620	Tube & uterus x-ray NEC
2666987179	3ED0B	603978	Cran nerv root decom NEC
2666987180	2JE1W	830373	Rev/repl epiretinal pros
2666987181	8ZY3F	704555	DIEP flap, free
2666987182	7GD9E	840228	Nueter
2666987183	3QX7J	886910	Other perfusion
2666987184	8PG5H	838185	Cystogram NEC
2666987185	8PS8Z	800088	Bilat lung transplant
2666987186	3ED0B	377950	Vital capacity determin
2666987187	2JE1W	766917	Eyelid dx procedure NEC
2666987188	8ZY3F	276675	Rectal perirect op NEC
2666987189	7GD9E	167780	Spay
2666987190	3QX7J	433622	Uterine support op NEC
2666987191	8PG5H	865331	Suture vas & epidid lac
2666987192	8PS8Z	446976	Remov biliary/liver tube
2666987193	3ED0B	789434	Repl stent in bile duct
2666987194	2JE1W	133414	BBBD via infusion
2666987195	8ZY3F	528012	Radioactive elem implant
2666987196	7GD9E	225400	Insert valve in vas def
2666987197	3QX7J	223017	Refus drs/drslmb ant/ant
2666987198	8PG5H	372652	Other myectomy
2666987199	8PS8Z	598160	Pharyngeal dx proc NEC
2666987200	3ED0B	655148	Scleral buckle w implant
2666987201	2JE1W	483139	Remov pyelos/nephros tub
2666987202	8ZY3F	698201	Dysphasia training
2666987203	7GD9E	814752	Chest wall sinogram
2666987204	3QX7J	283466	Breast split-thick graft
2666987205	8PG5H	158984	Pacemaker rate check
2666987206	8PS8Z	705378	Excision of lip les NEC
2666987207	3ED0B	233919	Open thyroid gland bx
2666987208	2JE1W	100153	Insert tissue expander
2666987209	8ZY3F	746510	Insert 1 vascular stent
2666987210	7GD9E	421094	Colostomy NOS
2666987211	3QX7J	448359	Oth chest cage rep/plast
2666987212	8PG5H	619774	Replace gastrostomy tube
2666987213	8PS8Z	228770	Total abd hyst NEC/NOS
2666987214	3ED0B	341434	Parastern hernia repair
2666987215	2JE1W	167837	Abdperneal res rectm NOS
2666987216	8ZY3F	634148	Fallopian tube op NEC
2666987217	7GD9E	446083	Operation on orbit NEC
2666987218	3QX7J	812451	Treadmill stress test
2666987219	8PG5H	518677	Reduction torsion testes
2666987220	8PS8Z	640157	Rigid proctosigmoidoscopy
2666987221	3ED0B	670837	Laparoscopic cecectomy
2666987222	2JE1W	616752	Suture ureteral lacerat
2666987223	8ZY3F	710139	Seg osteoplasty maxilla
2666987224	7GD9E	193520	Excise int mammary node
2666987225	3QX7J	475846	Check up
2666987226	8PG5H	742314	Vaccinations, Rabies
2666987227	8PS8Z	522511	Check up
2666987228	3ED0B	482053	Vaccinations, Rabies
2666987229	2JE1W	340099	Check up
2666987230	8ZY3F	589603	Vaccinations, Rabies
2666987231	7GD9E	115141	Check up
2666987232	3QX7J	187667	Vaccinations, Rabies
2666987233	8PG5H	830806	Check up
2666987234	8PS8Z	351786	Vaccinations, Rabies



# Prescriptions

Rx	Refill	ExpiryDate	Price
16585521	1	11/02/2017	6.94
38029432	4	03/20/2019	44.78
60786672	2	08/03/2018	31.52
88331072	9	09/06/2018	17.05
28613069	10	11/29/2017	20.83
25376459	2	09/27/2019	20.84
68057512	5	07/20/2019	50.73
73356352	4	08/20/2019	69.54
79228351	9	07/12/2018	58.70
64123222	3	01/18/2020	67.56
27037392	2	11/21/2017	47.69
46419623	5	10/31/2019	11.40
28086200	5	11/30/2018	69.12
35430109	9	01/02/2017	28.28
25999284	5	03/14/2017	41.97
24928320	9	04/01/2017	5.42
26841422	8	09/07/2018	58.42
54626844	0	07/12/2018	56.98
41375502	2	09/14/2017	47.65
84834454	4	12/17/2017	37.25
11132752	1	01/26/2018	38.84
29205957	10	11/19/2019	62.74
22306925	9	07/19/2019	14.59
22987887	8	08/26/2019	40.17
83351979	8	01/18/2018	65.68
16690574	10	05/23/2018	59.78
64600599	3	02/09/2018	39.09
33501867	10	05/30/2018	40.02
21159773	2	07/02/2017	69.04
76604903	10	09/19/2017	5.93
66885060	2	08/26/2019	6.41
17476666	4	02/01/2019	51.78
71812828	8	09/27/2017	54.83
60626779	8	01/03/2020	35.70
55095564	4	12/17/2018	66.02
86078034	5	12/13/2017	55.01
19878973	7	12/13/2019	40.94
15065441	7	01/06/2019	11.74
78477969	6	01/14/2020	62.60
68020883	9	01/25/2019	18.94
29103049	0	02/06/2019	25.07
60339314	2	01/09/2017	15.13
46603027	2	02/08/2020	31.76
78520841	6	12/03/2017	43.63
68853842	4	01/18/2018	57.34
49219851	4	08/31/2019	10.61
87374663	7	09/13/2019	39.82
10859019	0	09/19/2018	19.19
65838506	8	01/07/2019	5.94
56611093	9	08/26/2017	5.58
65175658	6	12/27/2017	46.71
50129128	8	12/21/2018	31.61
53386436	1	03/23/2017	29.29
86629476	9	02/08/2019	61.80
21500535	5	07/12/2019	10.76
21064814	10	04/04/2019	14.15
38301064	3	01/02/2019	60.81
16630747	4	08/06/2017	52.24
27237250	10	03/24/2017	55.83
72994679	3	02/15/2017	32.57

## Contains

Rx	RecordID	VetID
16585521	2666987175	7GD9E
38029432	2666987176	3QX7J
60786672	2666987177	8PG5H
88331072	2666987178	8PS8Z
28613069	2666987179	3ED0B
25376459	2666987180	2JE1W
68057512	2666987181	8ZY3F
73356352	2666987182	7GD9E
79228351	2666987183	3QX7J
64123222	2666987184	8PG5H
27037392	2666987185	8PS8Z
46419623	2666987186	3ED0B
28086200	2666987187	2JE1W
35430109	2666987188	8ZY3F
25999284	2666987189	7GD9E
24928320	2666987190	3QX7J
26841422	2666987191	8PG5H
54626844	2666987192	8PS8Z
41375502	2666987193	3ED0B
84834454	2666987194	2JE1W
11132752	2666987195	8ZY3F
29205957	2666987196	7GD9E
22306925	2666987197	3QX7J
22987887	2666987198	8PG5H
83351979	2666987199	8PS8Z
16690574	2666987200	3ED0B
64600599	2666987201	2JE1W
33501867	2666987202	8ZY3F
21159773	2666987203	7GD9E
76604903	2666987204	3QX7J
66885060	2666987205	8PG5H
17476666	2666987206	8PS8Z
71812828	2666987207	3ED0B
60626779	2666987208	2JE1W
55095564	2666987209	8ZY3F
86078034	2666987210	7GD9E
19878973	2666987211	3QX7J
15065441	2666987212	8PG5H
78477969	2666987213	8PS8Z
68020883	2666987214	3ED0B
29103049	2666987215	2JE1W
60339314	2666987216	8ZY3F
46603027	2666987217	7GD9E
78520841	2666987218	3QX7J
68853842	2666987219	8PG5H
49219851	2666987220	8PS8Z
87374663	2666987221	3ED0B
10859019	2666987222	2JE1W
65838506	2666987223	8ZY3F
56611093	2666987224	7GD9E
65175658	2666987225	3QX7J
50129128	2666987226	8PG5H
53386436	2666987227	8PS8Z
86629476	2666987228	3ED0B
21500535	2666987229	2JE1W
21064814	2666987230	8ZY3F
38301064	2666987231	7GD9E
16630747	2666987232	3QX7J
27237250	2666987233	8PG5H
72994679	2666987234	8PS8Z

## V. Testing

### Initial Menu Output

```
elliottt@otter:~/csci370/project$ ./vet
Enter user name: elliottt
Enter password:
```

```
*** Welcome to Welcome to the VI Vet Clinic System ***
```

```
Enter 'A' to view accounts
or 'N' to add a new customer
or 'S' to schedule an appointment
or 'C' to cancel an appointment
or 'H' to generate a medical history report
or 'R' to search for customer reminder contacts
or 'E' to exit this program
```

```
-----
Please enter your command:
```

### View Accounts (A)

#### **Correct Input**

```
Please enter your command: A
Please enter the owner ID to show all pets or the pet ID: 308657
*****
*   Account ID: 308657
*   Full Name: Blair Lapre
*   Email Address: blapre1a@a8.net
*   Address: 6 McBride Terrace
*****
**Blair Lapre's Pets **
```

```
PET 1:
* Pet ID: 670837
* Pet's Name: November
* Pet's Age: 10
* Species/Type: cat
* Colour: Grey
* Weight(lbs): 78
```

```
PET 2:
* Pet ID: 187667
* Pet's Name: Rodney
* Pet's Age: 7
* Species/Type: cat
* Colour: White
* Weight(lbs): 6
```

### Incorrect Input

Please enter your command: A  
Please enter the owner ID to show all pets or the pet ID: asdas  
Value must be between 6 and 6 characters.  
Please try again  
12345  
Value must be between 6 and 6 characters.  
Please try again  
123456  
Nothing found under this number.  
-----

### Create a New Account (N)

### Correct Input

Please enter your command: N  
\*\*\*\*\* CREATE A NEW ACCOUNT \*\*\*\*\*  
\*\*\*\*\* OWNER PROFILE - Please enter primary owner \*\*\*\*\*  
Owner Name (First Last): Tiff Elliott  
  
Email: tiffelliott97@gmail.com  
  
Street Address: 3020 Dolphin Drive  
Owner account created.  
\* PET PROFILE  
\* How many pets do they have? 2  
  
ENTER PET #1  
  
\* Pet name: Rick  
  
\* Age: 1  
  
\* Species/Types: Dog  
  
\* Color Description: Grey  
  
\* Weight (lbs): 12  
Pet account created.  
  
ENTER PET #2  
  
\* Pet name: Poppy  
  
\* Age: 4  
  
\* Species/Types: Cat  
  
\* Color Description: Calico  
  
\* Weight (lbs): 5  
Pet account created.  
-----

## Incorrect Input

Please enter your command: N

\*\*\*\*\* CREATE A NEW ACCOUNT \*\*\*\*\*

\*\*\*\*\* OWNER PROFILE - Please enter primary owner \*\*\*\*\*

Owner Name (First Last): 123

Must be a non number. Try again.

Owner Name (First Last): Bob Mendra

Email:

|||||

Value must be between 5 and 150 characters.

Please try again

Value must be between 5 and 150 characters.

Please try again

b12394@hotmail.ca

Street Address:

|||||

Value must be between 5 and 200 characters.

Please try again

Value must be between 5 and 200 characters.

Please try again

123 Forest Road

Owner account created.

\* PET PROFILE

\* How many pets do they have? a

Please enter an integer in the range 1 - 20: 0

Please enter an integer in the range 1 - 20: 1

ENTER PET #1

\* Pet name: 123

Must be a non number. Try again.

\* Pet name:

Value must be between 1 and 100 characters.

Please try again

Sianara

\* Age: asd

Must be a number. Try again.

\* Age: 3

\* Species/Types: 123

Must be a non number. Try again.

\* Species/Types: Lizard

\* Color Description: Green

\* Weight (lbs): 1

Pet account created.

## Changes to database:

## Owners:

```
SQL> select * from owners where name = 'Tiff Elliott';
```

```
OWNERID NAME
```

```
-----  
EMAIL
```

```
-----  
ADDRESS
```

```
-----  
991731 Tiff Elliott  
tiffelliott97@gmail.com  
3020 Dolphin Drive
```

```
SQL> select * from owners where name = 'Bob Mendra';
```

```
OWNERID NAME
```

```
-----  
EMAIL
```

```
-----  
ADDRESS
```

```
-----  
991732 Bob Mendra  
b12394@hotmail.ca  
123 Forest Road
```

## Pets:

```
SQL> select * from pets where ownerid = '991732'  
[ 2 ] ;
```

```
PETID PETNAME AGE  
-----  
SPECIES COLOUR WEIGHT OWNERID  
-----  
886917 Sianara 3  
Lizard Green 1 991732
```

```
SQL> select * from pets where ownerid = '991731'  
[ 2 ] ;
```

```
PETID PETNAME AGE  
-----  
SPECIES COLOUR WEIGHT OWNERID  
-----  
886915 Rick 1  
Dog Grey 12 991731  
886916 Poppy 4  
Cat Calico 5 991731
```

## Schedule a new appointment (S)

### Correct Input

Please enter your command: S  
SCHEDULE A NEW APPOINTMENT  
Enter the Pet's ID:  
385764  
PET 1:  
\* Pet ID: 385764  
\* Pet's Name: Zulu  
\* Pet's Age: 7  
\* Species/Type: dog  
\* Colour: Brown  
\* Weight(lbs): 4  
  
Enter the month (mm): 12  
Enter the day (dd): 4  
Enter the year (yyyy): 2020  
12/4/2020  
Enter the start time hour (h): 10  
Enter the start time minutes (m): 30  
10:30  
Enter the length of appointment in minutes.  
25  
Appoint at 12/4/2020 successfully created!

---

### Incorrect Input

Please enter your command: S  
SCHEDULE A NEW APPOINTMENT  
Enter the Pet's ID:  
ab  
Value must be between 6 and 6 characters.  
Please try again  
abvbbv  
Value must be between 6 and 6 characters.  
Please try again  
123456  
Pet ID not found, please try again, or press 0 to exit  
Enter the Pet's ID:  
385764  
PET 1:  
\* Pet ID: 385764  
\* Pet's Name: Zulu  
\* Pet's Age: 7  
\* Species/Type: dog  
\* Colour: Brown  
\* Weight(lbs): 4  
  
Enter the month (mm): 3  
Enter the day (dd): 3  
Enter the year (yyyy): 5555  
Please enter an integer in the range 2020 - 2030: 2030  
3/3/2030  
Enter the start time hour (h): e  
Please enter an integer in the range 0 - 24: 1  
Enter the start time minutes (m): 44  
Please enter an integer in the range 1 - 31: 23  
1:23  
Enter the length of appointment in minutes.  
abc  
Please enter an integer in the range 1 - 1000: 125  
Appointment at 3/3/2030 successfully created!

## Changes to database:

APTID	PETID	APTD	DATE
-----	-----	-----	-----
STARTTIME			
-----	-----	-----	-----
DURATION			
-----	-----	-----	-----
9799693507	385764	03-MAR-20	10.23.00 AM
01-APR-20	01.23.00	00.000000	AM
125			

```
SQL> select * from appointments where aptid = '9799693508';
```

APTID	PETID	APTD	DATE
-----	-----	-----	-----
STARTTIME			
-----	-----	-----	-----
DURATION			
-----	-----	-----	-----
9799693508	385764	04-DEC-20	10.30.00 AM
01-APR-20	10.30.00	00.000000	AM
25			

### Cancel an appointment

Please enter your command: C

Please enter the Pet's ID that you cancel or 000000 to exit this menu: 385764

Appointment found for this pet:

Appointment ID: 9799693508

Appointment Date: 04-DEC-20

Appointment Start Time: 01-APR-20 10.30.00 AM -07:00

Appointment Duration: 25

Appointment found for this pet:

Appointment ID: 9799693504

Appointment Date: 15-MAR-20

Appointment Start Time: 01-APR-20 12.30.00 PM -07:00

Appointment Duration: 25

Appointment found for this pet:

Appointment ID: 9799693505

Appointment Date: 03-DEC-20

Appointment Start Time: 01-APR-20 12.30.00 PM -07:00

Appointment Duration: 25

Appointment found for this pet:

Appointment ID: 9799693506

Appointment Date: 03-SEP-20

Appointment Start Time: 01-APR-20 12.12.00 PM -07:00

Appointment Duration: 120



Appointment found for this pet:

Appointment ID: 1122334433

Appointment Date: 06-OCT-20

Appointment Start Time: 01-APR-20 10.35.00 AM -07:00

Appointment Duration: 50

Appointment found for this pet:

Appointment ID: 9799693507

Appointment Date: 03-MAR-30

Appointment Start Time: 01-APR-20 01.23.00 AM -07:00

Appointment Duration: 125

Enter the Appointment ID of the appointment you would like to cancel: 9799693508

**\*\*CONFIRM CANCELLATION:** Are you sure you want to delete Appointment #9799693508 ?  
(y/n)\*\*y

Appointment successfully cancelled.

---

```
SQL> select * from appointments where aptid = '9799693508';
```

APTID	PETID	APTD	DATE
9799693508	385764	04-DEC-20	
01-APR-20	10.30.00	00.000000	AM
25			

```
SQL> select * from appointments where aptid = '9799693508';
```

```
no rows selected
```

Above shows before and after deleting the appointment.

### Generate Medical History (H)

#### **Added Incorrect Input to Demonstrate Error Checking:**

Please enter your command: H

Please enter the customer's Account ID to search OR Pet ID: abc

Value must be between 6 and 6 characters.

Please try again

1234

Value must be between 6 and 6 characters.

Please try again

198775

\*\*\*\*\*

\* Account ID: 198775  
\* Full Name: Hollis Stillwell  
\* Email Address: hstillwell0@theatlantic.com  
\* Address: 8893 Bonner Lane

\*\*\*\*\*

\*\*Hollis Stillwell's Pets \*\*

PET 1:

\* Pet ID: 385764  
\* Pet's Name: Zulu  
\* Pet's Age: 7  
\* Species/Type: dog  
\* Colour: Brown  
\* Weight(lbs): 4

Enter the pet ID you would like to generate a report of: 123

Value must be between 6 and 6 characters.

Please try again

abc

Value must be between 6 and 6 characters.

Please try again

385764

#### MEDICAL HISTORY

\*\*\*\*\* Patient 385764 \*\*\*\*\*

\* Pet Name: Zulu  
\* Age: 7  
\* Species/Type: dog  
\* Fur Color Description: Brown  
\* Weight(lbs): 4lbs

\*\*\*\*\*

\* MEDICAL NOTES: Rad node dissection NOS

\* Record No. 2666987175

#### PRESCRIPTION HISTORY

\*\*\*\*\* Patient 385764 \*\*\*\*\*

\* Rx #: 16585521  
\* Refill #: 1  
\* Expiration Date: 02-NOV-17  
\* \$6.94 (CAD)

\*\*\*\*\*

-----  
Please enter your command:

## Generate Reminder Contacts Report (R)

Please enter your command: R

Zulu's owner, Hollis Stillwell, needs a check-up reminder

CONTACT INFO:

\* Email: hstillwell0@theatlantic.com

\* Mailing Address: 8893 Bonner Lane

\* Account ID: 198775

\*\*\*\*\*

Alfa's owner, Darcee Danne, needs a check-up reminder

CONTACT INFO:

\* Email: ddanne2@dot.gov

\* Mailing Address: 1 Blackbird Junction

\* Account ID: 154436

\*\*\*\*\*

**[ Most Entries deleted to shorten report length, please see Report3-7-2020.txt for full results ]**

\*\*\*\*\*

Chester's owner, Natty Drinkale, needs a check-up reminder

CONTACT INFO:

\* Email: ndrinkale1b@nydailynews.com

\* Mailing Address: 65 Sundown Pass

\* Account ID: 284959

\*\*\*\*\*

Would you like to print a contact-sheet for 38 patients? (y/n)

y

Report generated.

-----

Please enter your command: E

elliottt@otter:~/csci370/project\$ ls

Makefile **Report3-7-2020.txt** vet vet.cpp vet.o

*Report Report3-7-2020.txt is included in submission.*