First things first , this idea is still baking. Open to suggestions / improvements . Basically looking for feedback and understand if this is something worth pursuing .

Problem and idea behind it

TLDR; No paths from one building to another. No mention of shortcuts one can use to get from one place to another.

I'm a second sem grad student. When I first got to Mason , I used the maps on the Mason Mobile app , but found one detail missing : You can't plot paths from one location to another. It just gives you your location and the location of your destination , but no path that you can follow to get there .

Additionally , over a month , I figured that you can take routes that are not on the map as such (through the grass , for instance) . The best example of this would be the path near Subway with the "Do not walk on grass sign" (when you're trying to get from aquia creek lane to ox road) . Now , I know it does say do not walk on the grass , but I've seen a ton of people do it , and I figure it's a much shorter way to get through campus .

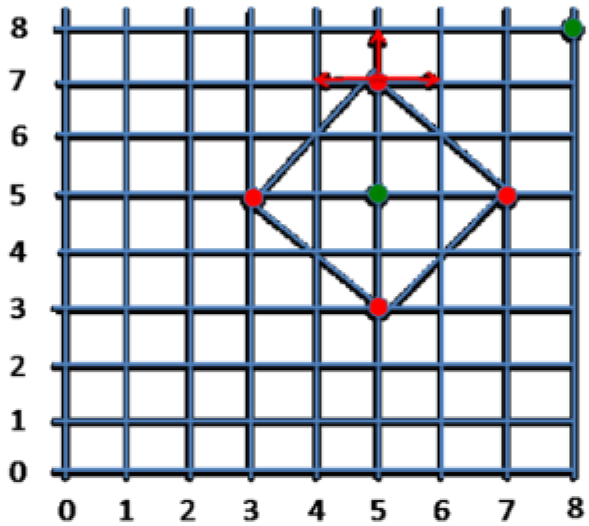
Solution

Okay , I'm not entirely sure if this is the right approach , but here's what I came up with.

Create a list of (lat,long) values for each point on the campus. Since lat,long can get really close , we could go really specific (for instance , consider each entrance/exit in the Johnson center to be a point) .

Now , each point can only be connected to it's adjacent points , and will have a length to it . (For example , a set of adjacent points can be the Johnson center entrance opposite Robinson hall B and the entrance for David King hall ….a set of non adjacent points can be David king hall and the aquatic center as you'd have to traverse through a bunch of other points to get there) . Think of this as a collection of points through which people can walk . Why do this ? Because I'm sometimes late for class and it'd be good to know the shortest possible route I could take .

I think this image illustrates what I'm trying to say :



sidenote : can include both designated paths for walking as well as shortcuts (which cut through the do not walk through grass signs , for instance) .

How would we figure out the shortest path ?

We consider an nxn matrix (with all the points on the x and y axis) , and traverse the shortest possible path from one point to another . This illustrates what I mean perfectly :

STATE DISTANCE GUIDE

	Bangalore	Belgaum	Bellary	Bidar	Bijapur	Chikmagalur	Chitradurga	Dharwar	Gulbarga	Hassan	Karwar	Kolar	Madikeri	Mandya	Mangalore	Mysore	Raichur	Shimoga
Belgaum	502																	
Bellary	349	310																
Bidar	712	465	436															
Bijapur	579	207	282	258														
Chikmagalur	224	402	298	568	523													
Chitradurga	202	304	134	570	367	164												
Dharwar	426	81	230	460	202	321	223											
Gulbarga	657	352	389	113	145	621	457	347										
Hassan	172	535	521	765	554	82	195	383	656									
Karwar	519	150	364	607	348	363	308	161	508	411								
Kolar	66	572	342	778	645	310	268	491	651	248	576							
Madikeri	252	587	413	888	685	185	318	506	775	123	396	315						
Mandya	98	581	343	779	558	179	196	500	652	117	466	164	151					
Mangalore	347	535	441	877	674	143	307	241	676	175	253	423	143	294				
Mysore	135	641	484	788	626	175	337	289	675	113	524	207	128	37	288			
Raichur	581	371	157	279	212	455	297	290	166	447	393	499	570	500	598	523		
Shimoga	275	312	245	575	417	90	111	231	462	152	259	341	275	279	186	265	373	
Tumkur	72	434	232	668	497	176	130	353	541	121	463	138	244	109	296	146	389	203

Important Road Distances in India from Bangalore & Mangalore -

Bangalore to ...	
Agartala	3,557
Agra	1,858
Ahmadabad	1,495
Aizawl	3,424
Allahabad	1,654
Amritsar	2,507
Aurangabad	913
Bhavnagar	1,682
Bhopal	1,401
Bhubaneshwar	1,440
Kolkata	1,881
Chandigarh	2,298
Chennai	331
Coimbatore	340
Dehra Dun	2,239
Delhi	2,061
Gangtok	2,571
Guwahati	2,932
Gwalior	1,734
Hyderabad	562
Imphal	3,416
Indore	1,315
Jaipur	1,985
Jaisalmer	2,094
Jalandhar	2,424
Jammu	2,643
Jodhpur	1,934
Kandla	1,860
Kanniyakumari	681
Kohima	3,271
Kolhapur	602
Lucknow	1,928
Ludhiana	2,365
Madurai	446
Mumbai	998
Nagpur	1,049
Panaji	592
Patna	1,988
Pondicherry	296
Porbandar	1,889
Pune	835
Rajkot	1,711
Rameswaram	601
Shillong	3,032
Shimla	1,610
Srinagar	2,403
Thiruvananthapuram	753
Tirupati	247
Udaipur	1,751
Vadodara	1,395
Vijayawada	633
Vishakhapatnam	1,015
Warangal	702

Mangalore to...	
Agartala	3,904
Ahmadabad	1,434
Aizawl	3,653
Bhopal	1,576
Bhubaneshwar	1,787
Calcutta	2,148
Chandigarh	2,527
Chennai	678
Gangtok	2,909
Guwahati	3,270
Hyderabad	791
Imphal	3,754
Jaipur	2,037
Lucknow	2,162
Mumbai	937
Panaji	395
Patna	2,217
Pondicherry	643
Shillong	3,370
Shimla	2,632
Srinagar	3,165
Thiruvananthapuram	606

(bad quality , sorry) .

What next ?

Once we have data regarding the shortest route from one point to another , the next step would be to allow users to query for the same. I'm not sure how I would incorporate a live location into this yet. I'm hoping #maps has some ideas.

Feedback ? Ideas ? Suggestions ? Interested in collaboration ? Shoot a message on slack 😊

Mail : sdonthin@gmu.edu

PS : I'm calling this LazyMason for now. Yeah. That.