



Programming 1 CAPSTONE PROJECT

Ireland HSE information kiosk

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1. INTRODUCTION

The goal of this capstone project is to allow us to explore Python3 via a project to embed the learning from the lectures and exercises.

The Health Service Executive (HSE) will deploy a low-cost, terminal-based kiosks that will allow the public access to basic information about their various premises. The kiosks will initially be developed on a, Debian GNU/Linux based, Raspberry Pi Operating System installed on Raspberry Pi devices. These devices have the potential to be employed as embedded devices for the mass rollout.

2. ACTIVITY

The Activities that we have performed in the assignment are as follow:

- Write the program "HSEKiosk.py" in Python.
- User Manual of Ireland HSE information Kiosk

3. Ireland HSE information Kiosk-User Manual

Welcome to HSE Kiosk, a Python-based output kiosk designed to provide quick and easy access to various types of healthcare information. With this kiosk, you can search for and display information on a variety of information, including hospital name, location, phone number, etc.

1. Introduction:

- The Ireland HSE information kiosk is a tool that allows visitors and patients to easily access information about hospitals in Ireland. The kiosk is designed to provide users with a range of search options, including searching by town or location, and specific searches for phone numbers, locations, and roles.
- The kiosk is user-friendly and easy to navigate, making it accessible to users of all ages and technical backgrounds.
- Upon starting the kiosk, users will be greeted with a welcome message and a list of available options.

2. Searching for hospitals:

- The kiosk allows users to search for hospitals in two different ways: by town or by location.
- To search for hospitals by town, users should select option 1 from the main menu and enter the name of the town in the

prompt. The kiosk will display a list of hospitals in that town, along with their ID, latitude, longitude, address, town, Eircode, role, and phone number.

- To search for hospitals by location, users should select option 2 from the main menu and enter the name of the location in the prompt. The kiosk will display a list of hospitals in that location, along with their ID, latitude, longitude, address, town, Eircode, role, and phone number.
- The kiosk will display one hospital at a time, and users can navigate through the list using the "Next" and "Previous" buttons.

3. Specific searches:

- In addition to searching by town or location, the kiosk also provides specific searches for phone numbers, locations, and roles.
- To search for hospitals by phone number, users should select option 3 from the main menu and enter the name of the hospital or location in the prompt. The kiosk will display a list of hospitals with phone numbers matching the search criteria.
- To search for hospitals by location, users should select option 4 from the main menu and enter the name of the location in the prompt. The kiosk will display a list of hospitals in that location, along with their ID, latitude,

longitude, address, town, Eircode, role, and phone number.

- To search for hospitals by role, users should select option 5 from the main menu and enter the name of the role in the prompt. The kiosk will display a list of hospitals with roles matching the search criteria, along with their ID, latitude, longitude, address, town, Eircode, role, and phone number.

4. System requirements:

- The kiosk requires a stable internet connection to function properly.
- It is recommended to use the latest version of a web browser for optimal performance.

5. Navigation:

- The kiosk is designed with a simple and intuitive user interface, making it easy for users to navigate and find the information they need.
- The main menu displays a list of options that users can select to initiate a search.
- The kiosk displays search results one hospital at a time, and users can navigate through the list using the "Next" and "Previous" buttons.

6. Search criteria:

- When searching for hospitals by town or location, users should enter the name of the town or location in the prompt exactly as it appears. The kiosk is case-sensitive, so users should make sure to enter the name in the correct case.
- When searching for hospitals by phone number, users should enter the phone number in the prompt exactly as it appears. The kiosk will only display hospitals with phone numbers that match the search criteria exactly.
- When searching for hospitals by role, users should enter the name of the role in the prompt exactly as it appears. The kiosk will only display hospitals with roles that match the search criteria exactly.

7. Contact information:

- If users have any questions or issues with the kiosk, they can contact the kiosk manufacturer or the HSE for assistance.
- The contact information for the kiosk manufacturer and the HSE should be included in the user manual.

8. Troubleshooting:

- If the kiosk is not functioning properly, users should ensure that it is connected to a stable internet connection.
- If the issue persists, users should contact the kiosk manufacturer or the HSE for assistance.

4. CONCLUSIONS

In conclusion, the Ireland HSE information kiosk is a valuable tool that provides users with a range of search options and is easy to use. Its user-friendly interface and wide range of search options make it an essential resource for anyone seeking information about hospitals in Ireland. In conclusion, the Ireland HSE information kiosk is a valuable resource for anyone seeking information about hospitals in Ireland. The kiosk offers a range of search options, including searching by town or location, and specific searches for phone numbers, locations, and roles. Its user-friendly interface and easy navigation make it accessible to users of all ages and technical backgrounds.

The kiosk provides a quick and convenient way to access hospital information, and its wide range of search options allow users to find the nearest hospital or the hospital that best meets their needs. Overall, the Ireland HSE information kiosk is an essential tool for anyone seeking information about hospitals in Ireland.

5. APPENDICES

A. List of hospitals in Ireland included in the kiosk's database:

ID	Hospital name	Latitude	Longitude	Address	Town	Eir code	Role	Phone
IE_20036	Millstreet Community Hospital	52.058	-9.0779352	Killarney Road	Millstreet	P51W9XE	Community	029 70003
IE_20232	Tralee General Hospital	52.265	-9.6891505	Ratass	Tralee	V92NX94	Paediatric Unit	066 7184000
IE_20042	Clifden District Hospital	53.49	-10.015577	Tullyvoheen	Clifden	H71YV83	Community	095 21301
IE_20098	Carraig Mor Centre	51.899	-8.5080172	Shanakiel	Cork	T23Y431	Mental Health	021 4541901
IE_20099	St. Stephen's Hospital	51.955	-8.4011999	Sarsfield Court, Glanmire	Cork	T45VK40	Mental Health	021 4821411
IE_20109	St Fintan's Hospital	53.036	-7.2843071	Dublin Road	Portlaoise	R32ED81	Mental Health	057 8621364
IE_	St. Brigid's	53.	-	Jervis Street	Ardee	A9	Mental	041

201 11	Hospital	85 7	6.5 492 44			2 DR N0	Health	6853264
IE_ 201 12	St. Davnet's Hospital	54. 25 1	- 6.9 611 807	Derry Road, Rooskey	Monag han	H1 8 T93 2	Mental Health	047 81822
IE_ 201 16	St. Loman's Hospital	53. 53 3	- 7.3 205 748	Devlin Road	Mullin gar	N9 1 X3 6E	Mental Health	044 84300
IE_ 201 18	Newcastle Hospital	53. 08 2	- 6.0 978 89	Killadreenan	Greyst ones	A6 3 CD 30	Mental Health	01 2819001
IE_ 201 20	St. John of God Hospital	53. 28 4	- 6.1 923 221	Stillorgan Road	Blackr ock	A9 4 YX 77	Mental Health	01 2771400
IE_ 201 22	The Highfield Hospital Group	53. 37 9	- 6.2 452 771	Swords Road, Whitehall	Dublin 9	D0 9 H3 43	Mental Health	01 8374444
IE_ 201 24	St. Edmundsbury Hospital	53. 36 3	- 6.4 376 619	Lucan Road	Lucan	K7 8 N W6 3	Mental Health	01 6218200
IE_ 201 28	Dublin Dental School and Hospital	53. 34 2	- 6.2 519 542	Lincoln Place	Dublin 2	D0 2 F85 9	Dental	01 6127200
IE_ 201 33	Drogheda Cottage Hospital	53. 71 9	- 6.3 437	Scarlet Street	Drogh eda	A9 2 V6	Geriatric	041 9801100

			028			XE		
IE_ 201 38	St. Patrick's Hospital	52. 25	- 7.1 027 072	John's Hill	Waterf ord	X9 1 XE 86	Geriatric	051 848000
IE_ 201 39	New Houghton Hospital	52. 38 9	- 6.9 377 906	Chambersland	New Ross	Y3 4 K7 44	Geriatric	051 421266
IE_ 201 40	St. John's Community Hospital	52. 49 6	- 6.5 722 039	Munster Hill	Ennisc orthy	Y2 1 N9 02	Geriatric	053 9233228
IE_ 201 44	St. Mary's Care Centre	53. 53 6	- 7.3 514 286	Longford Road	Mullin gar	N9 1 A4 0T	Geriatric & Rehab	044 9394931
IE_ 201 59	Stewarts Hospital	53. 35 5	- 6.3 657 085	Palmerstown	Dublin 20	D2 0 A3 06	Intellect ual Disabili ty	01 6264444
IE_ 201 72	Heatherside Hospital	52. 26 9	- 8.5 981 76	Streamhill Street	Buttev ant	P51 KH 63	Psycho- Geriatric	022 24377
IE_ 201 74	National Rehabilitation Hospital	53. 27 6	- 6.1 525 775	Rochestown Avenue	Dun Laoire	A9 6 E2 H2	Rehabili tation	01 2355000
IE_ 201 75	The Royal Hospital	53. 32 5	- 6.2 482 321	Morehampton Road, Donnybrook	Dublin 4	D0 4 HX 40	Rehabili tation	01 4066600
IE_ 201	St. Joseph's Care	53.	-	Dublin Road	Longf	N3	Geriatric	043

201 32	Centre	72 4	7.7 865 798		ord	9 ER 84	c	3346211
IE_ 201 07	St. Finian's Hospital	52. 06 7	- 9.5 098 208	Ballydribbeen	Killarn ey	V9 3 ND 30	Mental Health	064 6631022
IE_ 202 90	Our Lady's Children's Hospital Crumlin	53. 32 6	- 6.3 186 032	Crumlin	Dublin 12	D1 2 N5 12	Trauma - Child	01 4096100
IE_ 200 12	Pobal: Otharlann Ceantair an ChlochÃ;in LÃ©ith	54. 95 2	- 8.3 576 461	Gweedore Road	An Cloch Ã;n Liath	F94 Y3 26	Commu nity	074 9121044
IE_ 201 21	St Patrick's Mental Health Services	53. 34 4	- 6.2 918 531	Steevenâ€™s Lane	Dublin 8	D0 8 K7 Y W	Mental Health	01 2493200
IE_ 203 01	Venegas House	53. 29 1	- 6.1 321 107	88 George's Street Upper	Dun Laogh aire	A9 6 N9 P8	Mental Health	01 217 2100
IE_ 203 02	Cluain Mhuire	53. 28	- 6.1 873 488	Galloping Green, Stillorgan Road	Blackr ock	A9 4 Y8 W7	Mental Health	01 217 2100
IE_ 203 06	Fairview Community Unit	53. 36 8	- 6.2 419 413	Gheel Autism Services, Griffith Court	Dublin 3	D0 3 H5 04	Mental Health	01 884 2820
IE_ 203 07	Cluain Lir Care Centre	53. 53 6	- 7.3 521	Longford Road	Mullin gar	N9 1 T26	Mental Health	044 939 4931

			874			7		
IE_20309	St. Otteran's Hospital	52.247	-7.1035579	John's Hill	Waterford	X91DK31	Mental Health	051 848 000
IE_20310	Selskar House	52.344	-6.478264	Farnogue Healthcare Unit	Wexford	Y35HK84	Mental Health	053 9157800
IE_20311	Haywood Lodge	52.357	-7.7136989	Heywood Road	Clonmel	E91NV91	Mental Health	052 6177458
IE_20314	An Coilin	53.849	-9.307446	An Coillin, Westport Road	Castlebar	F23H744	Mental Health	094 902 1333
IE_20315	Teach Aisling	53.847	-9.3109358	Teach Aisling, Westport Road	Castlebar	F23R528	Mental Health	094 902 1333
IE_20316	St. Anne's Sacred Heart Hospital	53.863	-9.2990032	Pontoon Road	Castlebar	F23XV38	Mental Health	094 902 1122
IE_20317	Saint John's Community Hospital	54.28	-8.4686546	Ballytivnan Road, Ballytivnan	Sligo	F91H224	Mental Health	071 914 2606
IE_20320	St. Joseph's centre	53.387	-6.4324126	Clonsilla Road	Dublin 15	D15DH6F	Mental Health	01 821 7177
IE_	HSE Mental	53.	-	8 Vergemount	Dublin	D0	Mental	01 268

203 03	Health Services	31 7	6.2 413 504	Hall, Clonskeagh Road	6	6 TC 53	Health	0300
IE_ 203 04	HSE, Phoenix Care Centre	53. 35 7	- 6.2 854 799	North Circular Road	Dublin 7	D0 7 VP T0	Mental Health	01 795 8700
IE_ 203 05	HSE, Connolly Hospital	53. 38 9	- 6.3 681 384	Mill Road	Dublin 15	D1 5 X4 0D	Mental Health	01 646 5000
IE_ 201 71	The Incorporated Orthopaedic Hospital of Ireland	53. 36 7	- 6.2 015 905	Blackheath Park	Dublin 3	D0 3 AY 95	Orthopa edic	01 8332521
IE_ 200 43	Swinford District Hospital,	53. 94 3	- 8.9 459 08	Dublin Road	Swinf ord	F12 K2 29	Commu nity	094 9251102
IE_ 201 73	Mount Alvernia Hospital,	52. 12 4	- 8.6 846 247	Newberry	Mallo w	P51 XT 95	Psycho- Geriatric	022 21405
IE_ 200 82	St. Vincents University Hospital	53. 31 7	- 6.2 132 497	Elm Park, Nutley Lane	Dublin 4	D0 4 T6 F4	General /Acute	01 2214000
IE_ 200 03	Abbeylax District Hospital	52. 91 2	- 7.3 427 84	Ballinakill Road	Abbey lax	R3 2 FV 52	Commu nity	057 8731204
IE_ 201 36	Community Hospital Of The Assumption	52. 68 5	- 7.8 228 178	Castlemeadow s	Thurle s	E41 YN 59	Geriatric	0504 21055

IE_ 200 44	Baggot Street Community Hospital	53. 33 4	- 6.2 440 461	14/18 Baggot Street Upper	Dublin 4	D0 4 T6 N3	Commu nity	01 6681577
IE_ 200 40	Ballina District Hospital	54. 11 4	- 9.1 656 306	Mercy Road	Ballin a	F26 PP9 2	Commu nity	096 21166
IE_ 200 09	Sheil Hospital	54. 50 2	- 8.1 840 267	College Street	Ballys hanno n	F94 DR 40	Commu nity	071 9851300
IE_ 200 01	Baltinglass District Hospital	52. 93 2	- 6.6 791 275	Newtownsaund ers	Baltin glass	W9 1 EK 59	Commu nity	059 6481255
IE_ 200 22	Bandon Community Hospital	51. 74 4	- 8.7 245 88	Cloughmacsim on	Bando n	P72 W5 64	Commu nity	023 8841403
IE_ 201 88	Beacon Hospital	53. 27 7	- 6.2 199 599	Beacon Court, Sandyford Industrial Estate	Dublin 18	D1 8 AK 68	Private General	01 2945444
IE_ 200 05	Birr District Hospital	53. 09 8	- 7.8 996 535	Sandymount	Birr	R4 2 VN 80	Commu nity	057 9120819
IE_ 201 52	Blackrock Hospice	53. 29 9	- 6.1 782 84	Hospice, Sweetman's Avenue	Blackr ock	A9 4 F8 D9	Hospice	01 2064000
IE_ 201 77	Blackrock Clinic	53. 30 3	- 6.1 881	Rock Road	Blackr ock	A9 4 E4	Private General	01 2832222

			716			X7		
IE_ 201 23	Bloomfield Care Centre	53. 27 2	- 6.3 052 881	Stocking Lane	Dublin 16	D1 6 C6 T4	Mental Health	01 4950021
IE_ 201 01	Central Mental Hospital	53. 3	- 6.2 419 015	Dundrum Road	Dublin 14	D1 4 W0 V6	Mental Health	01 2989266
IE_ 200 06	Cahercalla Community Hospital	52. 83 3	- 9.0 038 024	Cahircalla	Ennis	V9 5 NR 59	Commu nity	065 6824388
IE_ 203 19	Cappahard Lodge	52. 85 5	- 8.9 635 264	Cappahard	Ennis	V9 5 CR 29	Mental Health	
IE_ 200 10	Carndonough Community Hospital	55. 24 5	- 7.2 677 041	Derry Road	Carnd onagh	F93 EW 7T	Commu nity	074 9374262
IE_ 201 05	Saint Vincent's Hospital,	53. 36 7	- 6.2 439 101	Convent Avenue	Dublin 3	D0 3 XK 40	Mental Health	01 8842436
IE_ 201 90	Saint Vincent's Private Hospital,	53. 31 5	- 6.2 092 009	Herbert Avenue, Merrion Road	Dublin 4	D0 4 N2 E0	Private General	01 2609200
IE_ 200 72	Roscommon University Hospital	53. 62 5	- 8.1 750 83		Ardsal lagh Beg	F42 AX 61	General /Acute	090 6626200
IE_ 200	St. Canice's	52.	-	Dublin Road	Kilken	R9	Mental	056

201 08	Hospital	64 9	7.2 319 145		ny	5 P23 1	Health	7784400
IE_ 200 90	Cork University Maternity Hospital	51. 88 2	- 8.5 105 663	Wilton	Cork	T12 YE 02	Materni ty	021 4920500
IE_ 200 57	Cork University Hospital	51. 88 3	- 8.5 105 33	Wilton	Cork	T12 DC 4A	General /Acute	021 4546400, 021 4920222 (A/E)
IE_ 200 30	Kenmare Community Hospital	51. 88 9	- 9.5 816 424		Kenm are	V9 3 AW 24	Commu nity	064 6679500
IE_ 200 56	Bantry General Hospital	51. 67 6	- 9.4 496 713	Carrignagat	Bantry	P75 DX 93	General /Acute	027 50133
IE_ 200 89	Beaumont Hospital	53. 39 2	- 6.2 256 538	Beaumont Road	Dublin 9	D0 9 C5 62	General /Acute	01 8093000
IE_ 200 93	Coombe Women & Infant University Hospital	53. 33 5	- 6.2 885 074	Dolphin's Barn Street	Dublin 8	D0 8 X W7 X	Materni ty	01 4085200
IE_ 201 69	Mid-Western Regional Orthopaedic Hospital	52. 52 8	- 8.7 122 327	Skagh	Croom	V3 5 F43 4	Orthopa edic	061 397276
IE_ 200	University College Hospital,	53. 27	- 9.0	Newcastle Road	Galwa y	H9 1	General /Acute	091 544544

73	Galway	6	650 136			YR 71		
IE_ 200 67	Letterkenny University Hospital	54. 96	- 7.7 343 43	Kilmacrennan Road	Letter kenny	F92 AE 81	General /Acute	074- 9125888
IE_ 200 63	Louth County Hospital	53. 98 9	- 6.4 028 853	Dublin Road	Dunda lk	A9 1 E67 1	General /Acute	042 9334701
IE_ 200 88	Mater Misericordiae University Hospital,	53. 35 9	- 6.2 682 256	Eccles Street	Dublin 7	D0 7 R2 W Y	General /Acute	01 8032000, 01 8607089 (A/E)
IE_ 200 69	Mayo University Hospital	53. 85 2	- 9.3 034 286	Westport Road	Castle bar	F23 H5 29	General /Acute	094 9021733
IE_ 200 59	Mercy University Hospital	51. 89 9	- 8.4 824 487	Grenville Place	Cork	T12 WE 28	General /Acute	021 2305042
IE_ 200 74	Midland Regional Hospital - Mullingar	53. 53 4	- 7.3 491 168	Longford Road	Mullin gar	N9 1 NA 43	General /Acute	044 9340221
IE_ 200 85	Naas General Hospital	53. 21 1	- 6.6 615 786	Craddockstow n Road	Naas	W9 1 AE 76	General /Acute	045 897221
IE_ 200 92	National Maternity Hospital	53. 34	- 6.2 459 929	Holles Street	Dublin 2	D0 2 YH 21	Materni ty	01 6373100

IE_20078	Mid Western Regional Hospital	52.858	-8.1911951	Tyone	Nenagh	E45PT86	General/Acute	067 31491
IE_20065	Our Lady of Lourdes Hospital Drogheda	53.723	-6.3549471		Drogheda	A92VW28	General/Acute	041 9837601
IE_20095	Our Lady's Children's Hospital Crumlin	53.326	-6.3186033	Crumlin	Dublin 12	D12N512	Paediatric	01 4096100
IE_20066	Our Lady's General Hospital	53.65	-6.6971448		Navan	C15RK7Y	General/Acute	046 9078500
IE_20071	Portiuncula Hospital, Ballinasloe (WHB)	53.327	-8.234634		Ballinasloe	H53T971	General/Acute	090 9648221
IE_20094	Rotunda Hospital	53.352	-6.2631586	Parnell Street	Dublin 1	D01P5W9	Maternity	01 8730700
IE_20166	Royal Victoria Eye and Ear Hospital	53.333	-6.2561832	Adelaide Road	Dublin 2	D02XK51	Ophthalmic/ENT	01 6644600
IE_20060	South Infirmary Victoria University Hospital	51.894	-8.4637918	Old Blackrock Road	Cork	T12X23H	General/Acute	021 4926100
IE_200	South Tipperary General Hospital	52.35	-7.7	Western Road	Clonmel	E91VY	General/Acute	052 6177000

52		5	143 207			40		
IE_ 200 81	St. Columcille's Hospital	53. 24 3	- 6.1 324 326	Bray Road	Lough linsto wn	D1 8 V9 K1	General /Acute	01 2825800
IE_ 200 83	Saint James's Hospital,	53. 33 9	- 6.2 966 277	James's Street	Dublin 8	D0 8 NH Y1	General /Acute	01 4537941
IE_ 200 53	St Luke's General Hospital Kilkenny	52. 66 6	- 7.2 627 999	Freshford Road	Kilken ny	R9 5 FY 71	General /Acute	056 7785000
IE_ 201 25	St Luke's Radiation Oncology Network	53. 31	- 6.2 674 825	Highfield Road	Dublin 6	D0 6 HH 36	Cancer	01 4065000
IE_ 200 54	University Hospital Waterford	52. 24 9	- 7.0 785 003	Dunmore Road	Waterf ord	X9 1 ER 8E	General /Acute	051 848000
IE_ 200 55	Wexford General Hospital	52. 34 3	- 6.4 824 022	Newtown Road	Wexfo rd	Y3 5 Y1 7D	General /Acute	053 9142233
IE_ 200 61	University Hospital Kerry	52. 26 5	- 9.6 891 505		Tralee	V9 2 NX 94	General /Acute	066 7184000
IE_ 200 79	Mid-Western Regional Hospital	52. 63 6	- 8.6 533 329	Saint Nessan's Road, Dooradoyle	Limeri ck	V9 4 F85 8	General /Acute	061 301111

IE_ 201 62	Cherry Orchard Hospital	53. 34 3	- 6.3 782 883	Ballyfermot Road	Dublin 10	D1 0 Y8 21	Mixed Use	01 6206000
IE_ 200 96	Temple Street Children's University Hospital	53. 35 7	- 6.2 621 584	Temple Street	Dublin 1	D0 1 F77 2	Paediatr ic	01 8784344
IE_ 202 79	Children's University Hospital Temple Street	53. 35 7	- 6.2 620 4	Temple Street	Dublin 1	D0 1 YC 67	Trauma - Child	01 8784344
IE_ 200 87	Connolly Hospital Blanchardstown	53. 38 9	- 6.3 681 384	Mill Road	Dublin 15	D1 5 X4 0D	General /Acute	01 6465000
IE_ 200 77	Midwestern Regional Hospital Ennis	52. 85 1	- 8.9 832 478	Gort Road	Ennis	V9 5 HN 29	General /Acute	065 6824464
IE_ 200 64	Monaghan Geriatric Hospital	54. 24 9	- 6.9 743 529		Monag han	H1 8 NV 91	General /Acute	047 38800
IE_ 200 34	Macroon Community Hospital,	51. 90 7	- 8.9 676 501		Macro om	P12 AX 83	Commu nity	026 41002
IE_ 201 84	Aut Even Hospital	52. 67 7	- 7.2 700 288	Freshford Road	Kilken ny	R9 5 D3 70	Private General	056 7775275
IE_ 201 85	Barrington's Hospital	52. 66 7	- 8.6 213	George's Quay	Limeri ck	V9 4 HE	Private General	061 313334

			802			2T		
IE_20182	Bon Secours Hospital - Kerry	52.27	- 9.7 130 377	Strand Street	Tralee	V9 2 P66 3	Private General	066 7149800
IE_20180	Bon Secours Hospital - Galway	53.278	- 9.0 196 194	Renmore Road	Galway	H9 1 KC 7H	Private General	091 757711
IE_20178	Bon Secours Hospital - Dublin	53.376	- 6.2 673 872	Glasnevin Hill	Dublin 9	D0 9 YN 97	Private General	01 8375111
IE_20176	Bon Secours Hospital	51.892	- 8.4 973 036	College Road	Cork	T12 DV 56	Private General	021 4542807
IE_20181	Galway Clinic	53.283	- 8.9 738 492	Doughiska	Galway	H9 1 HH T0	Private General	091 785000
IE_20193	Hermitage Medical Clinic	53.359	- 6.4 059 973	Lucan Road Old	Dublin 20	D2 0 W7 22	Private General	01 6459000
IE_20194	The Mater Private - Cork	51.886	- 8.4 061 993	Building 3000, City Gate, Mahon	Cork	T12 K1 99	Private General	021-6012300
IE_20179	Mater Private Hospital	53.358	- 6.2 643 215	Eccles Street	Dublin 7	D0 7 W K W8	Private General	01 8858888

IE_ 201 87	Saint Francis Private Hospital	53. 51 4	- 7.3 347 474	Ballinderry	Mullin gar	N9 1 FE 40	Private General	044 9341500
IE_ 201 86	Kingsbridge Private Hospital,	54. 26 9	- 8.4 816 048	Ray Mcsharry Road	Sligo	F91 X0 54	Private General	071 9162649
IE_ 201 92	Whitfield Clinic	52. 24	- 7.1 717 221	Cork Road, Butlerstown North	Waterf ord	X9 1 DH 9W	Private General	051 590296
IE_ 202 10	Sports Surgery Clinic	53. 40 5	- 6.2 536 635	Northwood Avenue, Northwood, Santry	Dublin 9	D0 9 C5 23	Private General	01- 5262000
IE_ 201 45	Saint Columba's Hospital	52. 53	- 7.1 319 996		Thoma stown	R9 5 YY 96	Geriatric & Rehab	056 24178
IE_ 200 39	Youghal Community Hospital	51. 95 8	- 7.8 600 553	Upper Cork Hill	Yough al	P36 HX 95	Commu nity	024 92106
IE_ 203 21	Saint James's Hospital Children's Health Ireland	53. 33 9	- 6.2 966 277	James's Street	Dublin 8	D0 8 NH Y1	Paediatr ic	
IE_ 200 75	Midland Regional Hospital - Portlaoise	53. 03 8	- 7.2 759 93	Dublin Road	Portla oise	R3 2 RW 61	General /Acute	057 8621364
IE_ 200 86	Adelaide & Meath Hospital Inc NCH	53. 29 1	- 6.3 782	Belgard Square North	Dublin 24	D2 4 NR	General /Acute	01 4142000

			54			0A		
IE_ 200 84	St. Michael's Hospital	53. 29 4	- 6.1 385 232	George's Street Lower	Dun Laogh aire	A9 6 P90 2	General /Acute	01 2806901
IE_ 201 67	Kilcreene Regional Orthopaedic Hospital	52. 65 2	- 7.2 742 345		Kilken ny	R9 5 DK 07	Orthopa edic	056 52465
IE_ 200 38	Skibbereen District Hospital,	51. 56 4	- 9.2 632 366	Coolnagurrane	Skibbe reen	P81 HC 43	Commu nity	028 21677
IE_ 200 76	Midland Regional Hospital - Tullamore	53. 28 2	- 7.4 910 106	Arden Road	Tulla more	R3 5 NY 51	General /Acute	057 93 21501
IE_ 200 62	Cavan General Hospital	54. 00 2	- 7.3 722 034	Lisdarn	Cavan	H1 2 Y7 W1	General /Acute	049 4376000
IE_ 200 70	Galway University Hospital - Merlin Park	53. 27 7	- 8.9 931 987	Merlin Park	Galwa y	H9 1 N9 73	General /Acute	091 775775
IE_ 200 80	St John's Hospital Limerick	52. 66 3	- 8.6 170 647	John's Street	Limeri ck	V9 4 H2 72	General /Acute	061 462222
IE_ 201 70	National Orthopaedic Hospital Cappagh	53. 39 4	- 6.3 277 039	Cappagh Road	Dublin 11	D1 1 EV 29	Orthopa edic	01 8140400
IE_ 201	Cahirciveen	51.	-	Valentia Road	Caherc	V2	Commu	066

200 23	Community Hospital	94 2	10. 234 503		iveen	3 PW 84	nity	9472100
IE_ 200 24	Castletownbere Community Hospital	51. 65 2	- 9.9 006 934	Derrymihan West	Castlet ownbe re	P75 PW 81	Commu nity	027 70004
IE_ 200 27	Dunmanway Community Hospital	51. 72 9	- 9.0 898 074	Ballyhalwick	Dunm anway	P47 W N2 7	Commu nity	023 8845102
IE_ 200 07	Ennistymon Community Hospital	52. 93 6	- 9.3 157 994	Dough	Ennist ymon	V9 5 CD 58	Commu nity	065 7071622
IE_ 200 29	Kanturk Community Hospital	52. 17 6	- 8.9 166 656		Kantur k	P51 PT 61	Commu nity	029 50024
IE_ 200 31	Killarney Community Hospital	52. 06 5	- 9.5 172 649	Saint Margaret's Road	Killarn ey	V9 3 EH 42	Commu nity	064 66 31076, 064 66 31018
IE_ 200 14	Lifford Community Hospital	54. 83 1	- 7.4 833 754	Bridge	Liffor d	F93 Y W0 2	Commu nity	074 9141033
IE_ 200 46	Our Lady's Community Hospital	54. 30 4	- 8.1 672 055		Manor hamilt on	F91 X0 12	Commu nity	071 9855123
IE_ 202 11	Mount Carmel	53. 30 5	- 6.2 655 539	Braemor Park	Dublin 14	D1 4 A5 R2	Commu nity	01- 4063423

IE_ 200 41	Belmullet District Hospital	54. 22 8	- 9.9 863 315		Belmu llet	F26 K1 H9	Commu nity	097 81301
IE_ 201 97	Buncrana	55. 13 4	- 7.4 501 145	Maginn Avenue	Buncr ana	F93 X2 25	Commu nity	074- 9135104
IE_ 200 51	Our Lady's County & Surgical Hospital	52. 51 4	- 7.8 883 104	Our Lady's Campus, Lower Green	Cashel	E25 P40 7	Commu nity	062 61022
IE_ 201 63	Peamount Hospital	53. 31 7	- 6.4 837 307	Peamount Road	Newca stle	D2 2 W1 Y6	Mixed Use	01 6010300
IE_ 201 61	St. Colman's Hospital	52. 93 4	- 6.2 397 757	Ballygannon	Rathdr um	A6 7 AK 06	Mixed Use	0404 46109
IE_ 201 64	St. Joseph's Hospital	53. 38 3	- 6.1 820 611	Springdale Road	Dublin 5	D0 5 W5 04	Mixed Use	01 8474900
IE_ 200 68	Sligo University Hospital	54. 27 4	- 8.4 633 61	The Mall	Sligo	F91 H6 84	General /Acute	071 9171111
IE_ 200 58	Mallow General Hospital	52. 15 1	- 8.6 636 069	Kilknockin	Mallo w	P51 N2 88	General /Acute	022 58700
IE_ 203 22	University Maternity Hospital Limerick	52. 66 7	- 8.6 333	Ennis Road	Limeri ck	V9 4 C5	Materni ty	061 327455

			681			66		
IE_20018	Castlecomer District Hospital	52.799	-7.214015	Donaguile	Castlecomer	R95A5XC	Community	0564441246
IE_20011	Donegal Community Hospital	54.656	-8.0990538	Drumlonagher	Donegal	F94V670	Community	0749721019
IE_20033	Listowel Community Hospital	52.447	-9.4977005	Convent Road	Listowel	V31RF79	Community	068 21022
IE_20026	Dingle Community Hospital	52.136	-10.266343	Farran	Dingle	V92PF65	Community	0669151455
IE_20008	Raheen Community Hospital	52.894	-8.5076351		Tuamgraney	V94AE71	Community	061923007
IE_20205	Castlebar	53.863	-9.2990032	Pontoon Road	Castlebar	F23XV38	Community	
IE_20017	St. Brigid's District Hospital	52.348	-7.4040396	Pill Road	Carrick-on-suir	E32D281	Community	051640025
IE_20000	St. Finbarr's Hospitals	51.889	-8.4598393	Douglas Road	Cork	T12XH60	Community	0214966555
IE_	Saint John's	54.	-	Ballytivnan	Sligo	F91	Communi	071

20050	Community Hospital	28	8.4 686 546	Road, Ballytivnan		H2 24	nity	9142606
IE_20165	Saint Patrick's Community Hospital	53.95	- 8.0 861 525	Summerhill	Carrick-on-shannon	N41 P89 7	Mixed Use	07 19620011
IE_20020	St. Vincent's District Hospital	52.088	- 7.6 357 31	Springmount	Dungarvan	X35 WA 22	Community	058 20992
IE_20025	Clonakilty Community Hospital	51.63	- 8.8 763 76	Mount Carmel, Convent Road	Clonakilty	P85 K1 60	Community	023- 8833205
IE_20028	Fermoy Community Hospital	52.139	- 8.2 559 119	Courthouse Road	Fermoy	P61 H5 82	Community	025 31300
IE_20021	Gorey District Hospital	52.674	- 6.3 000 628		Gorey	Y25 KX 86	Community	053 9421102
IE_20013	Killybegs Community Hospital	54.638	- 8.4 388 963	Donegal Road	Killybegs	F94 PK 84	Community	074 9732044
IE_20032	Kinsale Community Hospital	51.713	- 8.5 270 831	Rath Beg	Kinsale	P17 A0 27	Community	021 4772202
IE_20035	Midleton Community Hospital	51.918	- 8.1 726 615	The Green	Midleton	P25 DT 96	Community	021 4631516

IE_ 201 96	Ramelton	55. 03 4	- 7.6 483 386	Back Road	Ramel ton	F92 PX 58	Commu nity	074- 9151049
IE_ 200 16	Carlow District Hospital	52. 84 2	- 6.9 273 239	Athy Road	Carlo w	R9 3 DE 62	Commu nity	059 9136458
IE_ 201 41	Sacred Heart Hospital	52. 84 3	- 6.9 248 702	Old Dublin Road	Carlo w	R9 3 V8 25	Geriatric & Rehab	059 9136460
IE_ 200 37	Schull Community Hospital	51. 52 2	- 9.5 461 091	Colla Road	Schull	P81 NT 97	Commu nity	028 28120
IE_ 200 48	St' Ita's Hospital	52. 45 6	- 9.0 540 222		Newca stle West	V4 2 HD 66	Commu nity	069 62311
IE_ 201 26	St. Mary's Hospital	53. 71 1	- 6.3 410 163	Dublin Road	Drogh eda	A9 2 X8 62	Continu ing Care Service	041 9838680
IE_ 200 19	St. Theresa's District Hospital	52. 27 2	- 7.9 915 916	Mountanglesby	Clogh een	E21 Y4 47	Commu nity	052 65205
IE_ 202 06	Saint Camillus Hospital	52. 66 9	- 8.6 410 06	Shelbourne Road	Limeri ck	V9 4 5V 24	Commu nity	
IE_ 200 15	Saint Joseph's Community Hospital	54. 80 5	- 7.7 510	Mullindrait	Strano rlar	F93 FC R6	Commu nity	074 9131038

			405					
IE_ 200 49	Saint Mary's Hospital,	54. 12	- 6.7 448 035	Bree	Castle blayne y	A7 5 TD 61	Commu nity	042 9740014
IE_ 200 45	Saint Vincent's Hospital	52. 99 8	- 6.9 948 139	Woodstock Street	Athy	R1 4 AY 22	Commu nity	059 8631614
IE_ 201 27	University Dental School & Hospital	51. 88 4	- 8.5 129 118	Wilton	Cork	T12 E8 YV	Dental	021 4545100
IE_ 201 49	Marymount Hospice,	51. 87 1	- 8.5 415 865	Curraheen	Carrig rohane	T12 A7 10	Hospice	021 4501201
IE_ 201 37	Saint Patricks Hospital,	52. 51 2	- 7.8 918 616	Cahir Road	Cashel	E25 DX 72	Geriatric	062 61100
IE_ 201 29	St. Mary's Hospital	53. 35	- 6.3 363 413	Acres Road, Phoenix Park	Dublin 20	D2 0 TY 72	Geriatric	01 6250300
IE_ 201 31	St. Brigid's Hospital	53. 07 8	- 7.2 501 401	Shaen, The Heath	Portla oise	R3 2 FD 60	Geriatric	057 8646717
IE_ 201 42	St. Joseph's Hospital	52. 85 2	- 8.9 779 389	Lifford Road	Ennis	V9 5 RT 99	Geriatric & Rehab	065 6840666
IE_ 201	St. Joseph's	53.	-		Ardee	92	Geriatric	041

201 34	Hospital	85 7	6.5 437 433			Y3 94	c	6853304
IE_ 201 35	St. Oliver Plunkett Hospital	53. 98 9	- 6.4 028 853	Dublin Road	Dunda lk	A9 1 E67 1	Geriatric	042 9334488
IE_ 201 47	St. Joseph's Hospital	53. 55 1	- 6.7 900 969		Trim	C1 5 P59 2	Geriatric & Rehab	046 9431229
IE_ 201 46	St. Vincent's Hospital	53. 11 2	- 7.3 240 326	Irishtown	Mount mellic k	R3 2 HK 85	Geriatric & Rehab	057 8631204
IE_ 201 55	Donegal Hospice	54. 96 4	- 7.7 296 377	Cleary House, Knocknamona	Letter kenny	F92 K W1 8	Hospice	074 9177256
IE_ 201 53	Galway Hospice Foundation	53. 27 8	- 9.0 181 932	Dublin Road	Galwa y	H9 1 R2 T0	Hospice	091 770868
IE_ 201 56	Milford Hospice	52. 67 1	- 8.5 715 91	Plassey Park Road, Castletroy	Limeri ck	V9 4 H7 95	Hospice	061 485800
IE_ 201 54	Sligo University Hospital	54. 27 4	- 8.4 633 61	The Mall	Sligo	F91 H6 84	Hospice	071 9143317
IE_ 201 50	Our Ladys Hospice,	53. 32 7	- 6.2 814 812	Harold's Cross Road	Dublin 6w	D6 W RY 72	Hospice	01 4068700

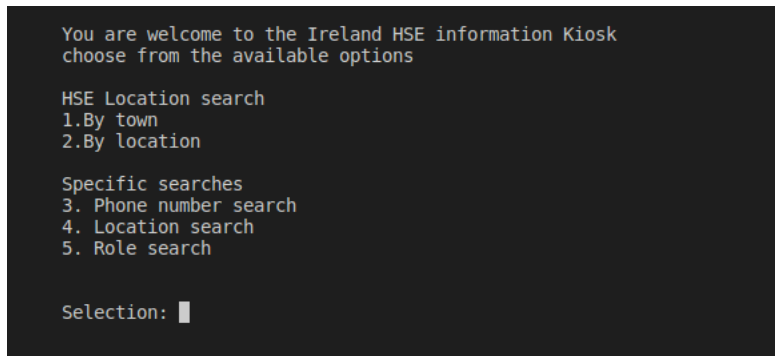
IE_20151	Saint Francis Hospice	53.385	-6.1748611	Station Road	Dublin 5	D05 E392	Hospice	01 8327535
IE_20160	St. Paul's Hospital & Special School	53.39	-6.2307057	Coolgreena Road	Dublin 9	D09 XN88	Intellectual Disability	01 8377673
IE_20158	St. Raphael's Centre	51.95	-7.8538775	Barrack Road	Youghal	P36 C596	Intellectual Disability	024 92422

B. List of search options available on the kiosk:

- Option 1: Search for hospitals by town
- Option 2: Search for hospitals by location
- Option 3: Search for hospitals by phone number
- Option 4: Search for hospitals by location
- Option 5: Search for hospitals by role

C. Screenshots of the kiosk's user interface:

- Main menu

A screenshot of a kiosk's user interface. The background is dark grey. The text is white and green. The text reads: "You are welcome to the Ireland HSE information Kiosk" in green, followed by "choose from the available options" in white. Below this, there are two sections. The first section is titled "HSE Location search" in white, followed by "1.By town" and "2.By location" in green. The second section is titled "Specific searches" in white, followed by "3. Phone number search", "4. Location search", and "5. Role search" in green. At the bottom, there is a prompt "Selection: " in white, followed by a white cursor bar.

```
You are welcome to the Ireland HSE information Kiosk
choose from the available options

HSE Location search
1.By town
2.By location

Specific searches
3. Phone number search
4. Location search
5. Role search

Selection: █
```

- Search results page

SELECTION:1

```
You are welcome to the Ireland HSE information Kiosk
choose from the available options

HSE Location search
1.By town
2.By location

Specific searches
3. Phone number search
4. Location search
5. Role search

Selection: 1
Which town?: carlow
ID           : IE_20141
Hospital_name : Sacred Heart Hospital
Latitude     : 52.843
Longitude    : -6.9248702
Address      : Old Dublin Road
Town         : Carlow
Eircode      : R93 V825
Role         : Geriatric & Rehab
Phone        : 059 9136460

Press ENTER to continue
```

- Specific search results page

SELECTION:2

```
You are welcome to the Ireland HSE information Kiosk
choose from the available options

HSE Location search
1.By town
2.By location

Specific searches
3. Phone number search
4. Location search
5. Role search

Selection: 2
Which location?: dublin
ID          : IE_20178
Hospital_name : Bon Secours Hospital - Dublin
Latitude    : 53.376
Longitude   : -6.2673872
Address     : Glasnevin Hill
Town       : Dublin 9
Eircode    : D09 YN97
Role       : Private General
Phone      : 01 8375111
```

SELECTION:3

```
Selection: 3
Which hospital or location?: carlow
Hospital Name : Sacred Heart Hospital
Phone       : 059 9136460
```

SELECTION:4

```
Selection: 4
Which area? waterford
Hospital Name : St. Otteran's Hospital
Latitude      : 52.247
Longitude     : -7.1035579
Address       : John's Hill
Town          : Waterford
Eircode       : X91 DK31

Hospital Name : University Hospital Waterford
Latitude      : 52.249
Longitude     : -7.0785003
Address       : Dunmore Road
Town          : Waterford
Eircode       : X91 ER8E

Hospital Name : Whitfield Clinic
Latitude      : 52.24
Longitude     : -7.1717221
Address       : Cork Road, Butlerstown North
Town          : Waterford
Eircode       : X91 DH9W
```

Press ENTER to continue

SELECTION:5

```
Selection: 5
Which Hospital or Location? DUBlin
0. Community
1. Paediatric Unit
2. Mental Health
3. Geriatric
4. Psycho-Geriatric
5. Rehabilitation
6. Orthopaedic
7. General/Acute
8. Hospice
9. Private General
10. Maternity
11. Paediatric
12. Ophthalmic/ENT
13. Cancer
14. Mixed Use
15. Trauma - Child
16. Geriatric & Rehab
17. Continuing Care Service
18. Dental
19. Intellectual Disability

Select required role: 10
```

D. Contact information for the kiosk manufacturer and the HSE:

- Kiosk manufacturer: Pankaj Rawat, Master of Science in Industrial Network, and cybersecurity
- HSE: [contact information]

6. REFERENCES

1. Python.org. (2022). *os — Miscellaneous operating system interfaces — Python 3.11.0 documentation*. [online] Available at: <https://docs.python.org/3/library/os.html> [Accessed 19 Dec. 2022].
2. Python.org. (2022). *argparse — Parser for command-line options, arguments and sub-commands — Python 3.11.0 documentation*. [online] Available at: <https://docs.python.org/3/library/argparse.html> [Accessed 20 Dec. 2022].