



Millennium's Hourly Borrower Activity Report: **On Steroids!**

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File created by an outside excel expert



IUG EGL at Akron–Summit Public Library
October 15, 2010

Page 1

Challenge: Library must reduce open hours;
you need to identify low traffic days and times.

Answer: Millennium resource:
Hourly Borrower Activity Report.

BORROWER ACTIVITY (GROUP 100 Oct 10)

DAY	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	with	TOTAL
1	2	16	17	6	15	6	7	7	18	0	0	0	0	0	0	0	0	114
2	0	4	34	11	15	11	12	5	10	3	0	0	0	0	0	0	0	105
3	0	0	1	7	27	12	8	13	1	0	0	0	0	0	0	0	0	81
4	2	29	13	9	11	9	13	11	12	13	12	7	7	4	0	0	0	148
5	0	3	8	49	9	15	4	12	9	7	17	5	10	1	0	0	0	149
6	4	25	33	6	7	7	18	8	16	13	12	10	4	3	0	0	0	166
7	0	12	32	7	7	8	4	7	9	5	6	6	0	0	0	0	0	109
8	0	7	5	65	5	4	8	12	16	2	0	0	0	0	0	0	0	124
9	0	6	16	35	11	8	11	7	8	4	0	0	0	0	0	0	0	102
TOTAL	9	122	159	195	107	74	89	77	109	48	47	28	27	8	0	0	0	1696
Total by day of week																		
Sun	0	0	1	7	27	12	12	8	13	1	0	0	0	0	0	0	0	81
Mon	2	29	13	9	11	9	13	11	12	13	12	7	7	4	0	0	0	148
Tue	0	3	8	49	9	15	4	12	9	7	17	5	10	1	0	0	0	149
Wed	4	25	33	6	7	7	18	8	16	13	12	10	4	3	0	0	0	166
Thu	0	12	32	7	7	8	4	7	9	5	6	6	0	0	0	0	0	109

I needed to identify low traffic weekdays and times so that we would impact the least number of patrons possible when the Board reduced our open hours.

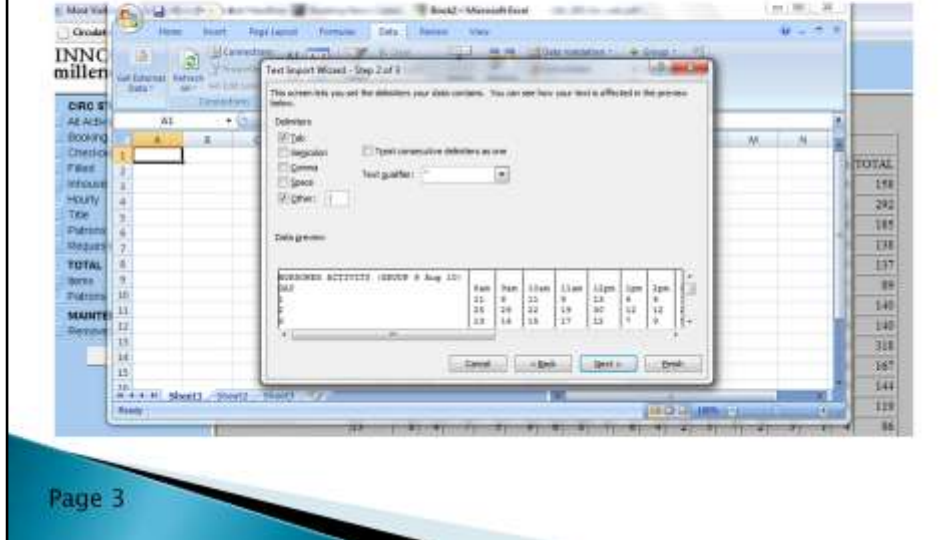
I looked in my Mil arsenal and found the summary table at the bottom of the screen: Total by day of week – but notice the up/down area which indicates that you have multiple Statistical groups – You would have to consolidate all the stat groups into one report to get the whole picture–

I knew that if I copied and pasted the detail lines into one file I could feed it into a pivot table to summarize the data – however, that takes a lot of time. I have done that and it takes hours and invariably – when I get one month done, the answers lead to more questions – for example, after looking at the data, you can realize that March was an off month because it was a migration month, so pull that month out and summarize just Jan and Feb – for the first quarter – this could take hours to redo!

I asked an excel guru for a better way and the result is this file.

The Hourly Borrower Activity Report... ON STEROIDS!

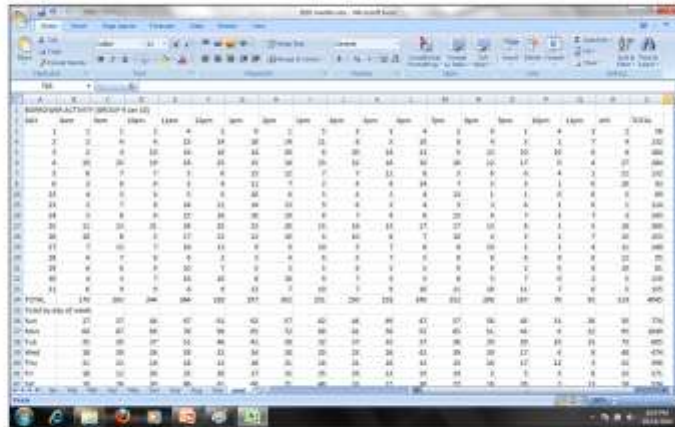
Import report into an excel file



Page 3

Run the Hourly Borrower Activity report for the first 9 months of 2010
Download the file and import the data to excel using | pipe delimiter

One sheet contains all the months



The screenshot shows an Excel spreadsheet with a grid of data. The columns are labeled with months from Jan to Dec. The rows contain numerical data for each month. At the bottom of the grid, there are summary rows for 'Total' and 'Average' for each month, and a grand total row at the very bottom.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	1	2	3	4	5	6	7	8	9	10	11	12	78
2	12	13	14	15	16	17	18	19	20	21	22	23	150
3	24	25	26	27	28	29	30	31	32	33	34	35	225
4	36	37	38	39	40	41	42	43	44	45	46	47	300
5	48	49	50	51	52	53	54	55	56	57	58	59	375
6	60	61	62	63	64	65	66	67	68	69	70	71	450
7	72	73	74	75	76	77	78	79	80	81	82	83	525
8	84	85	86	87	88	89	90	91	92	93	94	95	600
9	96	97	98	99	100	101	102	103	104	105	106	107	675
10	108	109	110	111	112	113	114	115	116	117	118	119	750
11	120	121	122	123	124	125	126	127	128	129	130	131	825
12	132	133	134	135	136	137	138	139	140	141	142	143	900
13	144	145	146	147	148	149	150	151	152	153	154	155	975
14	156	157	158	159	160	161	162	163	164	165	166	167	1050
15	168	169	170	171	172	173	174	175	176	177	178	179	1125
16	180	181	182	183	184	185	186	187	188	189	190	191	1200
17	192	193	194	195	196	197	198	199	200	201	202	203	1275
18	204	205	206	207	208	209	210	211	212	213	214	215	1350
19	216	217	218	219	220	221	222	223	224	225	226	227	1425
20	228	229	230	231	232	233	234	235	236	237	238	239	1500
21	240	241	242	243	244	245	246	247	248	249	250	251	1575
22	252	253	254	255	256	257	258	259	260	261	262	263	1650
23	264	265	266	267	268	269	270	271	272	273	274	275	1725
24	276	277	278	279	280	281	282	283	284	285	286	287	1800
25	288	289	290	291	292	293	294	295	296	297	298	299	1875
26	300	301	302	303	304	305	306	307	308	309	310	311	1950
27	312	313	314	315	316	317	318	319	320	321	322	323	2025
28	324	325	326	327	328	329	330	331	332	333	334	335	2100
29	336	337	338	339	340	341	342	343	344	345	346	347	2175
30	348	349	350	351	352	353	354	355	356	357	358	359	2250
31	360	361	362	363	364	365	366	367	368	369	370	371	2325
32	372	373	374	375	376	377	378	379	380	381	382	383	2400
33	384	385	386	387	388	389	390	391	392	393	394	395	2475
34	396	397	398	399	400	401	402	403	404	405	406	407	2550
35	408	409	410	411	412	413	414	415	416	417	418	419	2625
36	420	421	422	423	424	425	426	427	428	429	430	431	2700
37	432	433	434	435	436	437	438	439	440	441	442	443	2775
38	444	445	446	447	448	449	450	451	452	453	454	455	2850
39	456	457	458	459	460	461	462	463	464	465	466	467	2925
40	468	469	470	471	472	473	474	475	476	477	478	479	3000
41	480	481	482	483	484	485	486	487	488	489	490	491	3075
42	492	493	494	495	496	497	498	499	500	501	502	503	3150
43	504	505	506	507	508	509	510	511	512	513	514	515	3225
44	516	517	518	519	520	521	522	523	524	525	526	527	3300
45	528	529	530	531	532	533	534	535	536	537	538	539	3375
46	540	541	542	543	544	545	546	547	548	549	550	551	3450
47	552	553	554	555	556	557	558	559	560	561	562	563	3525
48	564	565	566	567	568	569	570	571	572	573	574	575	3600
49	576	577	578	579	580	581	582	583	584	585	586	587	3675
50	588	589	590	591	592	593	594	595	596	597	598	599	3750
51	600	601	602	603	604	605	606	607	608	609	610	611	3825
52	612	613	614	615	616	617	618	619	620	621	622	623	3900
53	624	625	626	627	628	629	630	631	632	633	634	635	3975
54	636	637	638	639	640	641	642	643	644	645	646	647	4050
55	648	649	650	651	652	653	654	655	656	657	658	659	4125
56	660	661	662	663	664	665	666	667	668	669	670	671	4200
57	672	673	674	675	676	677	678	679	680	681	682	683	4275
58	684	685	686	687	688	689	690	691	692	693	694	695	4350
59	696	697	698	699	700	701	702	703	704	705	706	707	4425
60	708	709	710	711	712	713	714	715	716	717	718	719	4500
61	720	721	722	723	724	725	726	727	728	729	730	731	4575
62	732	733	734	735	736	737	738	739	740	741	742	743	4650
63	744	745	746	747	748	749	750	751	752	753	754	755	4725
64	756	757	758	759	760	761	762	763	764	765	766	767	4800
65	768	769	770	771	772	773	774	775	776	777	778	779	4875
66	780	781	782	783	784	785	786	787	788	789	790	791	4950
67	792	793	794	795	796	797	798	799	800	801	802	803	5025
68	804	805	806	807	808	809	810	811	812	813	814	815	5100
69	816	817	818	819	820	821	822	823	824	825	826	827	5175
70	828	829	830	831	832	833	834	835	836	837	838	839	5250
71	840	841	842	843	844	845	846	847	848	849	850	851	5325
72	852	853	854	855	856	857	858	859	860	861	862	863	5400
73	864	865	866	867	868	869	870	871	872	873	874	875	5475
74	876	877	878	879	880	881	882	883	884	885	886	887	5550
75	888	889	890	891	892	893	894	895	896	897	898	899	5625
76	900	901	902	903	904	905	906	907	908	909	910	911	5700
77	912	913	914	915	916	917	918	919	920	921	922	923	5775
78	924	925	926	927	928	929	930	931	932	933	934	935	5850
79	936	937	938	939	940	941	942	943	944	945	946	947	5925
80	948	949	950	951	952	953	954	955	956	957	958	959	6000
81	960	961	962	963	964	965	966	967	968	969	970	971	6075
82	972	973	974	975	976	977	978	979	980	981	982	983	6150
83	984	985	986	987	988	989	990	991	992	993	994	995	6225
84	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	6300
85	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	6375
86	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	6450
87	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	6525
88	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	6600
89	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	6675
90	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	6750
91	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	6825
92	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	6900
93	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	6975
94	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	7050
95	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	7125
96	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	7200
97	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	7275
98	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	7350
99	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	7425
100	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	7500
101	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	7575
102	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	7650
103	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	7725
104	1235	1236	1237	1238	1								

You will need one big excel file
with lots of functions.



Page 5

This excel file will take large amounts of data, then manipulate and analyze it in a way such that other report permutations are available with a few keystrokes –

Size is 65,000 KB – save two copies and only change one of them so that you always have a working copy.

I hope this excel file can be applied to your library's configuration.

Let's see how we can make it happen.

1rst sheet is named group – lookup table for stat groups.

Code	Location	Dept	Station
9	9	9	9
100	Main	Main Staff	Staff
101	Main	Main Staff	Staff
102	Main	Main Staff	Staff
103	Main	Main Staff	Staff
104	Main	Main Staff	Staff
105	Main	Main Staff	Staff
106	Main	Main Staff	Staff
107	Main	Main Staff	Staff
108	Main	Main Staff	Staff
109	Main	Main Staff	Staff
110	Main	Main Staff	Staff
111	Main	Main Staff	Staff
112	Main	Main Staff	Staff
113	Main	Main Staff	Staff
114	Main	Main Staff	Staff
115	Main	Main Staff	Staff
116	Main	Main Staff	Staff
201	Headlands	Headlands	Staff
202	Headlands	Headlands	Staff
300	Lake	Lake Staff	Staff
301	Lake	Lake Staff	Staff
302	Lake	Lake Staff	Staff
303	Lake	Lake Staff	Staff
304	Lake	Lake Staff	Staff
305	Lake	Lake Staff	Staff
306	Lake	Lake Staff	Staff
307	Lake	Lake Staff	Staff
308	Lake	Lake Staff	Staff
309	Lake	Lake Staff	Staff
310	Lake	Lake Staff	Staff
400	MHS	MHS	Staff
401	MHS	MHS	Staff
402	MHS	MHS	Staff
403	MHS	MHS	Staff
404	MHS	MHS	Staff
405	MHS	MHS	Staff
406	MHS	MHS	Staff
407	MHS	MHS	Staff
408	MHS	MHS	Staff
409	MHS	MHS	Staff
410	MHS	MHS	Staff
411	MHS	MHS	Staff
412	MHS	MHS	Staff
413	MHS	MHS	Staff
414	MHS	MHS	Staff
415	MHS	MHS	Staff
416	MHS	MHS	Staff
417	MHS	MHS	Staff
418	MHS	MHS	Staff
419	MHS	MHS	Staff
420	MHS	MHS	Staff
421	MHS	MHS	Staff
422	MHS	MHS	Staff
423	MHS	MHS	Staff
424	MHS	MHS	Staff
425	MHS	MHS	Staff
426	MHS	MHS	Staff
427	MHS	MHS	Staff
428	MHS	MHS	Staff
429	MHS	MHS	Staff
430	MHS	MHS	Staff

Open/Closed	Open
Group	(All)
Location	Main
dept	(Multiple Items)
station	(Multiple Items)
Month	Sep-2010

Day of Week	8am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	Avg
Sun					88	72	70	70					75
Mon	29	58	76	59	61	72	68	84	75	69	73	46	64
Tue	34	66	96	65	59	79	72	78	78	68	74	42	68
Wed	43	60	64	52	54	59	54	63	55	55	56	51	58
Thu	28	63	58	44	49	53	52	65	56	51	53	32	54
Fri	21	38	73	42	48	58	58	76					54
Sat	21	45	85	86	85	82	72	83					70
Average	30	59	78	57	62	67	62	73	64	59	62	41	60

The first Sheet in the excel file is named group - it contains all of the stat codes that I created for our system.

This sheet is used as a lookup table to associate the stat code of each patron transaction to a location.

When I first started out, I created a stat code for each checkout terminal!
 Since then I only use a few – however, I still need the old stat codes when I run prior month reports...

MPL has 4 pickup locations, Main, Headlands, Lake and MHS Mentor High School
 This table breaks that stat code further by dept and station

2nd sheet named Open Times

Example update: If Main opens at 12PM on Sundays, click on cell H9 and type Open

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Location	Day of Week	Day of Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
2	WebSun	Web	Sun	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
3	WebMon	Web	Mon	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
4	WebTue	Web	Tue	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
5	WebWed	Web	Wed	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
6	WebThu	Web	Thu	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
7	WebFri	Web	Fri	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
8	WebSat	Web	Sat	Open	Open	Open	Open	Open	Open	Open	Open	Open	Open
9	MainSun	Main	Sun	Closed	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Closed
10	MainMon	Main	Mon	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open
11	MainTue	Main	Tue	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open
12	MainWed	Main	Wed	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open
13	MainThu	Main	Thu	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Open
14	MainFri	Main	Fri	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed
15	MainSat	Main	Sat	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed
16	HeadlandsSun	Headlands	Sun	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
17	HeadlandsMon	Headlands	Mon	Closed	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open
18	HeadlandsTue	Headlands	Tue	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed
19	HeadlandsWed	Headlands	Wed	Closed	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open
20	HeadlandsThu	Headlands	Thu	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed
21	HeadlandsFri	Headlands	Fri	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed
22	HeadlandsSat	Headlands	Sat	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed
23	LakeSun	Lake	Sun	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
24	LakeMon	Lake	Mon	Closed	Closed	Closed	Closed	Closed	Open	Open	Open	Open	Open
25	LakeTue	Lake	Tue	Closed	Open	Open	Open	Open	Open	Open	Open	Open	Closed

Page 7

The second Sheet named Open Times needs updated to Reflect the open days and times of each location

3rd sheet named Input Sheet- paste excel output from the Millennium report over the existing rows.

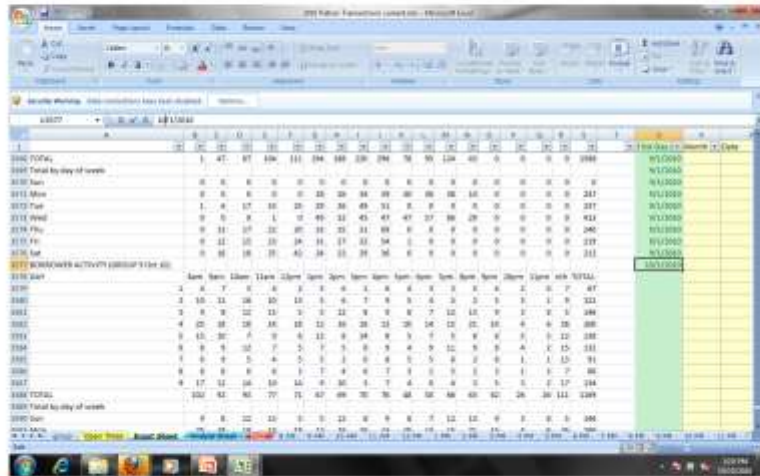
Always paste over rows; do not delete rows

DAY	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	12h	TOTAL	
1	1	1	1	3	4	2	8	1	9	9	4	2	19	1	4	8	2	88	
2	2	2	4	4	15	14	18	14	11	8	5	10	8	4	3	1	7	4	132
3	3	2	4	18	16	16	14	20	8	20	14	13	9	12	20	10	6	8	194
4	4	19	25	18	18	23	15	16	23	22	16	20	18	12	17	8	4	27	264
5	5	8	7	7	5	8	13	12	7	7	11	8	3	6	8	4	1	21	132
6	6	2	8	4	5	4	11	7	2	4	4	14	7	5	5	3	0	38	90
7	7	3	6	3	1	2	2	2	1	4	1	1	2	3	3	0	2	2	40
8	8	6	1	3	3	2	2	0	8	8	2	0	3	1	0	0	1	3	40
9	9	1	8	4	14	15	8	10	9	7	7	3	8	2	6	2	2	3	104
10	10	2	5	7	11	20	12	13	20	6	7	6	10	14	7	7	1	9	135
11	11	12	26	17	18	17	12	18	24	19	19	9	13	15	7	9	9	90	256
12	12	6	8	10	13	11	5	9	9	12	6	12	9	7	4	2	4	20	152
13	13	7	0	5	6	20	5	4	4	7	7	9	10	9	5	1	2	9	113
14	14	10	4	2	7	4	8	7	3	4	1	1	1	4	4	1	9	9	73
15	15	1	1	2	2	4	8	5	4	8	4	2	1	0	1	1	0	2	48
16	16	1	4	8	17	11	12	16	20	5	2	4	7	9	2	6	2	1	105
17	17	2	11	12	17	20	13	7	8	4	10	10	16	8	20	4	4	2	153
18	18	18	23	12	18	29	15	18	24	19	12	23	17	13	11	6	4	28	225
19	19	11	14	11	16	8	11	7	12	8	10	9	8	12	1	2	8	17	168
20	20	2	20	8	10	7	1	0	4	5	8	13	14	6	5	1	2	18	128
21	21	4	0	7	4	3	6	7	2	9	4	8	3	6	4	1	0	9	90
22	22	4	4	1	1	5	10	6	1	4	1	4	14	1	1	6	0	6	68

The third sheet is named Input Sheet –
 The fourth sheet is the Analysis Sheet – it gets recalculated automatically by the formulas in the Input Sheet

Run the Hourly Borrower Activity report for the first 10 months of 2010

Scroll Right to Column U:
type first day of corresponding month
repeat for each row to the last row



Page 9

Updates to the Input Sheet you have to do by hand after you paste your year of reports over the existing reports

Column U needs to have the first date of the corresponding month's data

Lots of columns!

The image shows two Excel spreadsheets side-by-side. The left spreadsheet, titled 'Analysis', has columns for 'Date', 'Year', and 'Day of Week'. The right spreadsheet, titled 'Total', has columns for 'Open', 'Close', 'High', 'Low', 'Volume', and 'Total'. Both spreadsheets contain data for the month of January 2018, with rows for each day. The data in the 'Total' sheet is derived from the 'Analysis' sheet via formulas, as indicated by the yellow background of the cells.

Date	Year	Day of Week	Open	Close	High	Low	Volume	Total
1/1/2018	2018	Sun	Open	Open	Closed	Closed	Closed	Closed
1/2/2018	2018	Mon	Open	Open	Closed	Closed	Closed	Closed
1/3/2018	2018	Tue	Open	Open	Closed	Closed	Closed	Closed
1/4/2018	2018	Wed	Open	Open	Closed	Closed	Closed	Closed
1/5/2018	2018	Thu	Open	Open	Closed	Closed	Closed	Closed
1/6/2018	2018	Fri	Open	Open	Closed	Closed	Closed	Closed
1/7/2018	2018	Sat	Open	Open	Closed	Closed	Closed	Closed
1/8/2018	2018	Sun	Open	Open	Closed	Closed	Closed	Closed
1/9/2018	2018	Mon	Open	Open	Closed	Closed	Closed	Closed
1/10/2018	2018	Tue	Open	Open	Closed	Closed	Closed	Closed
1/11/2018	2018	Wed	Open	Open	Closed	Closed	Closed	Closed
1/12/2018	2018	Thu	Open	Open	Closed	Closed	Closed	Closed
1/13/2018	2018	Fri	Open	Open	Closed	Closed	Closed	Closed
1/14/2018	2018	Sat	Open	Open	Closed	Closed	Closed	Closed
1/15/2018	2018	Sun	Open	Open	Closed	Closed	Closed	Closed
1/16/2018	2018	Mon	Open	Open	Closed	Closed	Closed	Closed
1/17/2018	2018	Tue	Open	Open	Closed	Closed	Closed	Closed
1/18/2018	2018	Wed	Open	Open	Closed	Closed	Closed	Closed
1/19/2018	2018	Thu	Open	Open	Closed	Closed	Closed	Closed
1/20/2018	2018	Fri	Open	Open	Closed	Closed	Closed	Closed
1/21/2018	2018	Sat	Open	Open	Closed	Closed	Closed	Closed
1/22/2018	2018	Sun	Open	Open	Closed	Closed	Closed	Closed
1/23/2018	2018	Mon	Open	Open	Closed	Closed	Closed	Closed
1/24/2018	2018	Tue	Open	Open	Closed	Closed	Closed	Closed
1/25/2018	2018	Wed	Open	Open	Closed	Closed	Closed	Closed
1/26/2018	2018	Thu	Open	Open	Closed	Closed	Closed	Closed
1/27/2018	2018	Fri	Open	Open	Closed	Closed	Closed	Closed
1/28/2018	2018	Sat	Open	Open	Closed	Closed	Closed	Closed
1/29/2018	2018	Sun	Open	Open	Closed	Closed	Closed	Closed
1/30/2018	2018	Mon	Open	Open	Closed	Closed	Closed	Closed
1/31/2018	2018	Tue	Open	Open	Closed	Closed	Closed	Closed

After you paste those formulas for each row of the month , The Excel file automatically updates the Analysis Sheet

Select the Pivot sheet and Refresh

The screenshot shows an Excel window titled "2010 Patient Transactions.xlsx" with a PivotTable named "PivotTable1". The PivotTable is based on the "Transactions" data source. The PivotTable fields are: Row Labels: Name; Columns: Month. The PivotTable shows a summary of transactions by name and month. A context menu is open over the PivotTable, and a tooltip is displayed over the "Refresh" option.

Row Labels	Month	10Jan	10Mar	10Jun	10Jan	10Jun	10Jan	10Jun	10Jan	10Jun	10Jan	10Jun
Sam				265	215	218	221					
Mon		67	176	228	176	185	216	203	251	324	309	319
Tue		136	272	391	260	324	315	387	311	310	371	396
Wed		217	390	521	260	270	295	269	315	276	277	276
Thu		141	314	388	219	246	260	258	327	280	255	300
Fri		65	231	291	249	170	238	232	362			
Sat		62	180	241	340	340	328	388	333			
Grand Total		768	1,471	1,860	1,427	1,726	1,865	1,747	2,059	1,990	1,811	1,937

Internal Table: Location/ Month Subtotal Table

The screenshot displays a PivotTable with the following filters:

- Open/Closed: Open ✓
- Group: (All) ▾
- Location: Main ✓
- dept: (Multiple Items) ✓
- station: (Multiple Items) ✓
- Month: Sep-2010 ✓

A date selection dialog is open, showing a list of dates from 1/1/2010 to 9/1/2010. The date 9/1/2010 is selected. The dialog includes a "Select Multiple Items" checkbox and "OK" and "Cancel" buttons.

The PivotTable data is summarized below:

Row Labels	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Sun		111	225	263	215	210	211					
Mon	87	174	228	176	183	216	203	251	224	208	219	139
Tue	136	272	391	260	234	315	287	313	310	271	294	168
Wed	217	300	321	260	270	295	289	315	276	277	279	255
Thu	141	314	288	219	248	265	258	327	280	255	285	162
Fri	85	231	291	169	192	230	232	302				
Sat	83	180	341	343	340	329	288	333				
Grand Total	748	1,471	1,971	1,652	1,728	1,865	1,747	2,050	1,090	1,011	1,057	724

Page 13

Pivot sheet has 2 internal work tables: one of them is the Location / Month subtotal table

The subtotal table is used to total all of the transactions for each weekday and time we were open in that month.

Internal calculation table: Sum of Open Hours Location Counter Table

Open/Closed	Open
Group	(All)
Location	Main
dept	(Multiple Items)
station	(Multiple Items)
Month	Sep-2010

September, 2010						
Su	Mo	Tu	We	Th	Fr	Sa
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2
3	4	5	6	7	8	9

BORROWER ACTIVITY (GROUP 100 Sep 10)					
DAY	8am	9am	10am	11am	
1	2	7	39	22	
2	3	3	16	42	
3	0	10	30	9	
4	2	5	7	32	
7	0	15	10	96	
8	2	11	24	32	
9	2	5	25	33	

Sum of Open Hours Location Counter												
Row Labels	8am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm
Sun			3	3	3	3	3	3				
Mon	3	3	3	3	3	3	3	3	3	3	3	3
Tue	4	4	4	4	4	4	4	4	4	4	4	4
Wed	5	5	5	5	5	5	5	5	5	5	5	5
Thu	5	5	5	5	5	5	5	5	5	5	5	5
Fri	4	4	4	4	4	4	4	4				
Sat	4	4	4	4	4	4	4	4				
Grand Total	25	25	28	28	28	28	28	17	17	17	17	17

No input data for Sep 5th and 6th because the library was closed for Labor Day. Therefore there were only 3 Sundays and Mondays in Sep.

Page 14

Another internal table in the Pivot sheet

Is named Sum of Open Hours Location Counter

And calculates the correct number of days to divide the subtotals by to get the average.

In this example, the library was closed Sep 5th and 6th for Labor day, therefore there was no input

From Day 5 and Day 6 in the BORROWER ACTIVITY table –

the excel file calculates that there were only 3 Sundays and 3 Mondays in Sep of data

This way, the subtotals for Sundays and Mondays are divided by the correct number of times the day occurred in the month.

Only 3 Sundays contributed to the Subtotal – therefore you need to divide the total by 3 not 4

Board friendly report: Combine all of the statistical groups into one pivot table.

Group	(All)
Location	Main
dept	(Multiple Items)
station	(Multiple Items)
Month	Sep-2010

Average Transactions per hour													
Day of Week	8am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	Avg
Sun			37	75	88	72	70	70					89
Mon	29	58	76	59	61	72	68	84	75	69	73	46	64
Tue	34	68	88	65	59	79	72	78	78	68	74	42	68
Wed	43	69	64	52	54	59	54	63	55	55	56	51	56
Thu	28	63	58	44	49	53	52	65	59	51	53	22	50
Fri	21	38	73	42	48	58	58	78					54
Sat	21	45	85	86	83	82	72	83					70
Average	30	55	70	55	62	67	62	73	64	58	62	41	60

1/1/2010
 2/1/2010
 3/1/2010
 (blank)
 4/1/2010
 5/1/2010
 6/1/2010
 7/1/2010
 8/1/2010
 9/1/2010

 Select Multiple Items

Page 15

The result – Average Transactions per hour color coded table

you can click on a Month dropdown filter

And select Sep 20 '10 – instantly – only Sep data is filtered into this report

There is now data in the 11am and 12 pm cells since I changed the Open Hours sheet

Select the Month dropdown to get different month combinations

The screenshot shows an Excel spreadsheet with a data table and a dropdown menu. The dropdown menu is open, showing a list of months from 1/1/2010 to 9/1/2010. The data table is titled 'Average Transactions per hour' and shows the number of transactions per hour for each day of the week and time slot.

		Average Transactions per hour													
		Day of Week	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	Avg
10am	Sun				37	41	100	83	69	71					70
	Mon		34	30	34	66	70	74	70	83	81	76	70	50	68
	Tue	559	31	29	88	61	58	72	69	71	70	66	67	49	65
	Wed	710	38	36	75	56	57	57	54	62	54	55	56	48	56
	Thu	507	27	64	63	53	56	57	51	67	58	53	54	37	53
	Fri	575	25	55	74	49	49	56	57	77					55
	Sat	442	23	55	77	77	76	75	68	79					67
	Average	471	30	64	70	61	68	68	62	71	65	62	62	48	61
18	Grand total		1,557	1,264	4,104	3,572	3,894								



Questions?



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Page 17